



RIPE NETWORK COORDINATION CENTRE » ANNUAL REPORT

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>> Contact

RIPE Network Coordination Centre
P.O. Box 10096
1001 EB Amsterdam
The Netherlands

Phone: +31 20 535 4444
Fax: +31 20 535 4445
www.ripe.net

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1 >> Introduction

>> Foreword

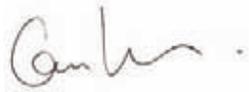
In April 1992, the RIPE NCC was formed by the RIPE community as the world's first Regional Internet Registry (RIR). Today, one of its original tasks remains the provision of unique Internet resources and related services. Since its inception, the RIPE NCC has proved capable of adapting to changing industry requirements and the needs of its members. As a result, it has performed many activities for the benefit of its members, the RIPE community and the Internet community as a whole.

RIPE NCC membership growth continued in 2005, with a 10% increase in the number of members. It is worth noting that, despite this large growth in members, the RIPE NCC's expenditure has not increased for the last four years. Improved operational efficiency has allowed the RIPE NCC to maintain a high quality of service, serving an ever-growing user base, while keeping expenses down.

Over the last three years, the RIPE NCC, in collaboration with a range of industry partners including the other RIRs, has been extensively involved in the World Summit on the Information Society (WSIS). I am happy to report that the result of the WSIS in November 2005 had a positive outcome for the RIRs and their communities. The role of governments inside the area of Internet governance was defined, along with a clear decision for governments not to become involved in the daily operational and technical matters of the Internet. This result, while recognising the importance of full involvement of all stakeholders, allows for the continued successful operation of the Internet and was a successful outcome for the Internet community.

I would like to take this opportunity to welcome AfriNIC as an officially recognised RIR for the African Internet community. Its establishment was a noteworthy achievement in the industry in 2005. It was another positive example of RIR and community cooperation, and represented the culmination of a number of years' work by all the RIRs, the Internet community in Africa and a range of industry partners and stakeholders.

Finally, I would like to thank the RIPE NCC membership and the RIPE community for its continued support of the organisation. Coordination and collaboration between the many organisations that play a role in Internet administration and development is vital for maintaining the strength and stability of the Internet. I am pleased to say that, with the support of its members and the RIPE community, the RIPE NCC continues to play a leading role in these efforts and contributes to the growth of the powerful, global tool that the Internet has become.



Kees Neggers
Executive Board Chairman



Kees Neggers
Executive Board Chairman



“Since its inception, the RIPE NCC has proved capable of adapting to changing industry requirements and the needs of its members. As a result, it has performed many activities for the benefit of its members, the RIPE community and the Internet community as a whole.”

Kees Neggers

>> Review and Outlook



Axel Pawlik,
RIPE NCC Managing Director



“In November 2005, the conclusion of the second phase of the WSIS reinforced the long-established, policy development processes of the RIRs.”

Axel Pawlik

2005 was an exciting and challenging year for the RIPE NCC. It was a year in which the self-regulatory Regional Internet Registry (RIR) system was called into question at the World Summit on the Information Society (WSIS); something that could have had a huge impact on the way the RIPE NCC functions.

In November 2005, the conclusion of the second phase of the WSIS reinforced the long-established, policy development processes of the RIRs. It recognised that the RIR processes fully support open participation by the Internet community, allowing for fair, equitable and representative Internet number resource allocation policies.

Building on its leading role in the technical coordination of IP networking, the RIPE NCC also organised and participated in a range of meetings with a growing community of stakeholders, industry bodies and government representatives. These meetings included members of the European Commission and government representatives from throughout the RIPE NCC service region.

During these meetings, the RIPE NCC focused on explaining the principles and success of the self-regulatory structures of the RIRs in order to secure continued support for the existing registry process. In addition, the RIPE NCC contributed to a range of papers that were published in cooperation with industry partners and stakeholders. These documents were intended to promote a greater understanding of existing Internet governance mechanisms by explaining the cooperation that is fundamental to the stability of the Internet.

The formalisation of the RIPE Policy Development Process (PDP) also took place in 2005. This was a major achievement for the RIPE community, which called for formal documentation of the existing processes for developing IP address space policies. The RIPE NCC, as requested by the RIPE community, offered full administrative and technical support. The success of the formalised RIPE PDP is just one example of the effective coordination between the RIPE NCC and the RIPE community.

Throughout 2005, and in the lead up to the WSIS, it was encouraging to see the strong support given to the RIPE NCC and the RIR structure by the membership as well as the community. An example of this support came early in the year when the European Telecommunications Network Operators' Association (ETNO) published its common position on the future of IPv6 management, a statement that concluded with explicit support for the current RIR system. ETNO is an association whose members are the largest consumers of IP addresses in Europe.

The positive responses from RIPE NCC members and the Internet community proved how important it is for the RIPE NCC to monitor and react to proposals or activities that could impact IP address administration and management. In all these activities, the RIPE NCC's goal is to represent the needs of its members and the RIPE community.

Operational relations with the Internet Corporation for Assigned Names and Numbers (ICANN) have also improved further over 2005. The RIPE NCC was pleased to note improved staffing within the Internet Assigned Numbers Authority (IANA). While the RIPE NCC stated its support for ICANN, both in its own right and as part of the Number Resource Organization (NRO), it still strives to solidify the relationship between ICANN and the NRO through the development of contracts detailing IANA service levels and the levels of financial contribution from the RIRs.

The Year Ahead

Looking ahead to 2006, the RIPE NCC will continue in its efforts to develop relationships with policy makers in the public and private sectors and to win the continued confidence of these stakeholders. The RIPE NCC will monitor the developments that emerge from the WSIS outcome in order to respond effectively, on behalf of our members and the RIPE community, to any relevant issues, particularly with regards to the Internet Governance Forum. These responses will be coordinated with our industry partners and other stakeholders, continuing the collaborative efforts that proved successful during the WSIS process and beyond.

The RIPE NCC held its first Roundtable Meeting in March 2005, in order to discuss Internet management issues with governments, regulators and industry partners. By holding more Roundtable Meetings, publishing more papers and continuing to organise Regional Meetings, the RIPE NCC will be more accessible than ever before to our colleagues in the public and private sectors. The RIPE NCC will also incorporate feedback received from the RIPE NCC 2005 Membership Survey and focus efforts on building productive relationships, providing opportunities for discussing IP address administration and management issues.

During 2006, the RIPE NCC will improve the consistency of the processes for distributing Internet number resources to members as well as strengthening the robustness of this system. We will also focus on IT security activities to further secure internal IT infrastructure and services. The RIPE NCC will develop and deploy security systems to enable the introduction of new activities should they be necessary in the future, such as support for routing security. As always, the RIPE NCC is committed to working alongside its members and the Internet community to develop a thorough understanding of the needs, implications and technical deployment regarding all activities.

I would also like to take this opportunity to thank the RIPE NCC members for their ongoing support of the RIPE NCC and call for their continued participation in the long-established processes that have made the RIR system successful over the years. In the constantly evolving Internet landscape, the RIPE NCC continues to focus its efforts on meeting the needs of its members and the Internet community. After thirteen years of successful operations, the RIPE NCC is in a solid position to fulfil these requirements.



Axel Pawlik

RIPE NCC Managing Director

Highlights 2005

Membership

Total membership 2005 (31 Dec. 2005): 4210

Number of new applications in 2005: 684

Total new members 2005: 386

Total membership growth in 2005: 10%

Key Financial Figures 2005

Surplus: 2,684 kEur

Total Expenditure: Down 3% from 2004

Key Activities in 2005

March:

First RIPE NCC Roundtable meeting.

April:

Early Registration Transfer (ERX) completed.

July:

Results of RIPE NCC Membership Survey 2005 published.

September:

RIPE Policy Development Process (PDP) formalised.
RIPE NCC Regional Meeting, Moscow.

November:

RIPE NCC E-Learning Centre launched.

December:

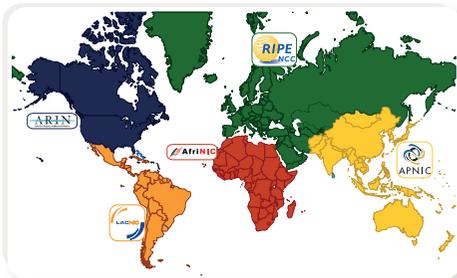
RIPE NCC ends the membership of all members from the African continent. All claims for payment of outstanding service fees and all membership data are permanently transferred to AfriNIC.

>> About the RIPE NCC

Mission

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

While an activity may result in services being provided to an individual member, performing the activity as a whole must benefit the RIPE NCC membership as a group.



>> Regions served by each Regional Internet Registry

The RIPE Network Coordination Centre (NCC) is an independent, not-for-profit membership organisation. It has a membership base of 4,210 (at 31 December, 2005) members in 65 countries across Europe, the Middle East and Central Asia.

The RIPE NCC supports the development of the Internet through technical coordination of the Internet infrastructure in its service region and beyond. It is an open and transparent, neutral and impartial, bottom-up, self-governing organisation based in Amsterdam, the Netherlands, employing around 90 staff. A concise overview of the RIPE NCC is given in the RIPE NCC Information Sheet, available at:

<http://www.ripe.net/ripenncc/about/infosheet.pdf>

Membership

Anyone can become a member of the RIPE NCC. The membership consists mainly of Internet Service Providers (ISPs), telecommunication organisations and large corporations. There is a one-time, sign-up fee for new members. Each member is then assigned to one of five billing categories based on the services it uses.

In all of its activities, the RIPE NCC observes strict neutrality and impartiality in regard to individual members.

More information about becoming a member is available at:

<http://www.ripe.net/membership/>

The RIPE NCC's Role as a Regional Internet Registry

The most prominent activity of the RIPE NCC is to act as the Regional Internet Registry (RIR) in its service region. RIRs provide Internet resources, such as Internet Protocol version 4 (IPv4) and Internet Protocol version 6 (IPv6) address space as well as Autonomous System Numbers (ASNs), to their members. An overview of countries in the RIPE NCC service region can be found at:

<http://www.ripe.net/membership/maps/index.html>

RIPE NCC Services and Activities

The RIPE NCC also provides services for the benefit of the Internet community as a whole, such as the development, operation and maintenance of the RIPE Whois Database. The database provides contact details and registration and assignment information about networks in the RIPE NCC service region. More information about the RIPE Whois Database can be found at:

<http://www.ripe.net/db/index.html>

Other RIPE NCC activities and services include:

- Administrative support for RIPE Working Groups and the Internet community
- Outreach activities such as RIPE Meetings, Regional Meetings and Roundtable Meetings
- Operating one of the world's root name servers
- Deployment of a neutral measuring network, providing public and authoritative statistics on the operation of the Internet
- The operation of a routing database

RIPE NCC activities and services are described in the RIPE NCC Activity Plan, available at:

<http://www.ripe.net/ripe/docs/ap.html>

Setting and Evaluating RIPE NCC Activities

All RIPE NCC activities, and the services it offers, are defined, performed, discussed and evaluated in an open manner. The RIPE NCC obtains input and feedback from the RIPE NCC Executive Board, the RIPE NCC Services Working Group and RIPE NCC members via feedback surveys, RIPE Meetings and RIPE NCC General Meetings. The RIPE NCC Executive Board approves the RIPE NCC Activity Plan each year, incorporating any feedback given by members during the RIPE NCC General Meeting held every autumn.

Structural Overview

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

Members:

- Are responsible for nominating and electing candidates to the RIPE NCC Executive Board
- Are responsible for approving the RIPE NCC Charging Scheme each year
- Approve the Financial Report each year
- Provide input to, and feedback on, the RIPE NCC's Activity Plan and Budget
- Give general input on the activities and services of the RIPE NCC through participation in public mailing lists and at RIPE Meetings
- As part of the wider community, develop Internet policy, in particular IP address policies
- Use the services provided by the RIPE NCC

The RIPE NCC Executive Board:

- Is elected by the RIPE NCC members at RIPE NCC General Meetings
- Is responsible for appointing the RIPE NCC management, for the overall financial situation of the RIPE NCC and for keeping records that allow the current financial situation to be evaluated
- Represents the members and guides the RIPE NCC management
- Approve the RIPE NCC Activity Plan and Budget

The RIPE NCC staff:

- Perform the activities of the RIPE NCC
- Provide administrative support to the RIPE Working Groups and the Internet community
- Provide services for RIPE NCC members

RIPE NCC's Involvement with the NRO and the ASO

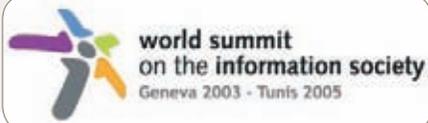
The RIPE NCC, along with the other RIRs, forms part of the Number Resource Organization (NRO). The NRO's main aims are to protect the unallocated Internet number resource pool, to promote and protect the bottom-up policy development process and to act as a focal point for the Internet community to input into the RIR system. In 2005, the RIPE NCC held the Chair of the NRO, with Axel Pawlik acting as Chairman. More details about the NRO can be found on page 22. The NRO also performs the function of the Address Supporting Organization (ASO), one of three supporting organisations called for in the Internet Corporation for Assigned Names and Numbers (ICANN) bylaws. The ASO reviews and develops recommendations on Internet policy relating to the system of IP addresses and advises the ICANN Board on these matters. More information about the RIPE NCC's participation in the ASO can be found on page 9.



>> RIPE NCC Executive Board

From left: Frode Greisen (ICANN Liaison), Kees Neggers (Chairman), János Zsakó (Treasurer), Jim Reid (Member), Nigel Tittle (Secretary)

>> RIPE NCC in the Internet Industry in 2005



>> Inside the World Summit on Information Society (WSIS), Tunis 2005



>> RIPE NCC Managing Director and 2005 Chair of the NRO, Axel Pawlik, gives an interview to the media on behalf of the Number Resource Organization (NRO)

World Summit on the Information Society (WSIS)

Over the last few years, the RIPE NCC has been actively involved in the many phases of the World Summit on the Information Society (WSIS), including the final summit in Tunisia in November 2005.

The RIPE NCC participated in WSIS in its own right and in cooperation with the other Regional Internet Registries (RIRs) as the Number Resource Organization (NRO). The commitment of time and resources to WSIS was significant, reflecting the importance of the process to the future of the Internet and the potential impact on the addressing system.

In a forum of diverse stakeholders, myths and misconceptions about the Internet addressing system were a real concern. The outcome of the WSIS could have had a serious impact on the open, bottom-up, industry self-regulatory processes that have underpinned the Internet since its inception. The RIRs and the NRO worked hard to ensure that all communications were focused and timely and that the needs of RIR members and the Internet community as a whole were well represented.

During WSIS, the NRO joined together with the Internet Society (ISOC), Internet Corporation for Assigned Names and Numbers (ICANN), the Internet Engineering Taskforce (IETF) and several other organisations to form the 'Internet Pavilion' at the Summit's 'ICT4all' exhibition. The pavilion helped spread understanding of the current system to government, civil society, and industry delegates, as well as to the international media.

The RIPE NCC participated in WSIS and related activities as part of its continued efforts to support its membership and the RIPE community and represent their interests to Internet industry groups and governments. The main goal of these activities remains the promotion of the self-regulatory structure common to all RIR communities in managing Internet address resources.

The outcome of the WSIS in 2005 recognised the processes and services provided by the RIRs to the Internet community. It affirmed that neither competitive nor parallel registry systems were needed, recognising that RIR processes fully support the open participation of the Internet community, allowing for fair, equitable, and representative resource allocation policies. It also recognised that these processes will continue to balance the priorities for Internet resource management at global, regional and local levels, ensuring the stability and integrity of the Internet's global addressing and routing structures.

Outreach to Governments and Regulators

The RIPE NCC also continued to build on its position as a neutral and credible organisation in the sphere of IP address administration and management. During 2005, the RIPE NCC developed closer relations with a growing community of stakeholders, industry bodies and government representatives. The RIPE NCC's outreach efforts in 2005 were focused on creating increased dialogue between the public and private sectors to create a common understanding of the issues, roles and responsibilities relevant to IP address administration and management.

As a part of the RIPE NCC's efforts to include governments and other stakeholders in the technical coordination of Internet resource management, the RIPE NCC held two meetings with the European Commission. The meetings allowed the RIPE NCC to discuss the technical and administration structures of the Internet, particularly in light of the WSIS process. These discussions aimed to provide the European Commission with an understanding of RIPE NCC activities and the open, inclusive Policy Development Process of the RIPE community.

The RIPE NCC opened dialogue with governments and regulators within the RIPE NCC service region by organising two Roundtable Meetings in 2005. The meetings targeted governments and regulators and focused on issues relevant to the public sector, such as IPv4 and IPv6 address allocation policies, Internet routing and the feasibility of competitive IP addressing registries.

The first Roundtable Meeting was held in March 2005 and brought together government representatives from 17 different countries. The positive feedback received during this meeting led to the RIPE NCC facilitating a Roundtable Meeting on IP Addressing held by the NRO in cooperation with the ICANN Governmental Advisory Committee (GAC). This meeting was held in July 2005, and attracted 70 participants from 32 countries.

Throughout 2005, RIPE NCC representatives attended other meetings relevant to Internet governance issues. The RIPE NCC also published a range of statements and informational papers to communicate the effectiveness of the RIR system and win continued support for this structure.

In recognition of the RIPE NCC's efforts to ensure that the interests of the RIR communities regarding IP address space distribution continue to be represented and understood, the Internet Services Providers' Association (ISPA) nominated the RIPE NCC for an Internet Hero award. The RIPE NCC was nominated as a result of its external relations activities.

The Address Supporting Organization

The Address Supporting Organization (ASO) is one of three supporting organisations called for in the Internet Corporation For Assigned Names and Numbers (ICANN) bylaws. The purpose of the ASO is to review and develop recommendations on IP address policy and to advise the ICANN Board on these matters.

In October 2004, the Number Resource Organization (NRO), on behalf of the RIRs, signed a Memorandum of Understanding (MoU) with ICANN on the ASO. This MoU also outlines a policy process that promotes industry self-regulation of the unallocated number resource pool (IPv4, IPv6 and AS Numbers). In 2005, the RIPE NCC, together with the other RIRs, finalised the process for an ASO governed by the new MoU.

ASO Address Council (AC) members are appointed through nomination and election processes in each of the RIR regions. In 2005, the ASO AC elected Hans Petter Holen (Visma, Norway) as Chair of ASO Address Council for 2005. Mr. Holen was appointed to the AC by the RIPE NCC service region, along with Sabine Jaume-Rajaonia (RENATER, France) and Wilfried Woeber (Vienna University, Austria). Wilfried Woeber is the RIR appointed member to the ASO AC.

The secretariat function rotates between the RIRs on an annual basis. In 2005, LACNIC performed this function. More information about the RIPE NCC and the ASO is available at:

<http://www.ripe.net/info/resource-admin/aso.html>



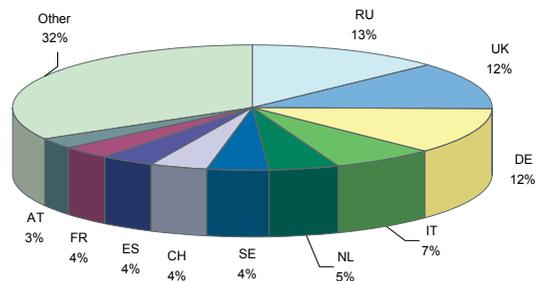
>> The UK Internet Services Providers' Association (ISPA) nominated the RIPE NCC for an Internet Hero award in 2005

2 >> RIPE NCC Activities 2005

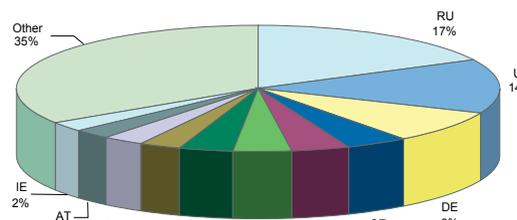
>> Membership Overview

In 2005, the total number of members increased by 10% to 4,210 members. As a result of mergers and closures, the net membership growth for 2005 was 386 members.

Membership growth increased slightly in the ten countries with the most members in the RIPE NCC service region. New members from Russia made up 17% of the total number of new members in 2005. In the RIPE NCC service region, Russia is now the country with the most members, with 545 members, followed by the UK with 521 members.

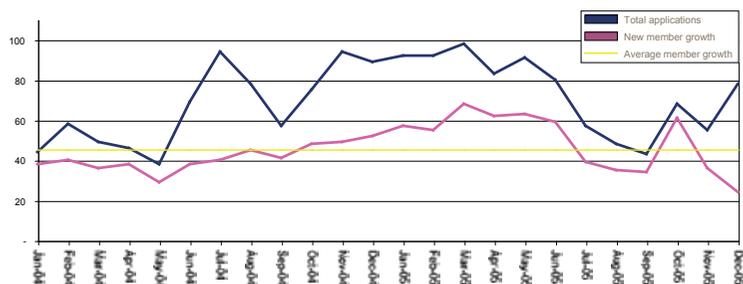


>> Total Members per country 2005

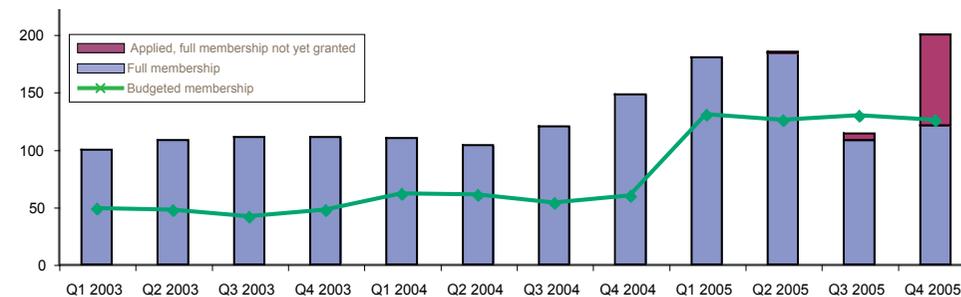


>> New Members per country 2005

Number of members in each billing category, 2005	
Extra large	39
Large	137
Medium	697
Small	1,971
Extra small	1,366



>> Membership status 2004-2005, per month



>> Membership overview 2003-2005, per quarter

>> Registration Services

The most prominent activity performed by the RIPE NCC is provision and registration of unique Internet resources and related services (IPv4, IPv6 and AS Number resources) in the RIPE NCC service region. The overall goal is to ensure the fair distribution of Internet resources while maintaining accurate registration data.

The RIPE NCC processed a total of 16,378 requests for resources and related services in 2005. Although this is an 11.4% decrease compared with 2004, the number of requests in 2004 was high because of the additional requests generated by Early Registrations Transfer (ERX). The initial response times for resource requests and membership applications continued to remain stable during 2005. The time taken to complete requests has reduced during the year and the RIPE NCC is committed to further improving its service levels.

A number of request forms and their supporting notes were updated over the course of the year, improving the wording without changing the actual content, making them easier to use. These changes were part of an ongoing project to improve the wording of all RIPE NCC request forms and supporting notes. An overview of all address space managed by the RIPE NCC is available at:

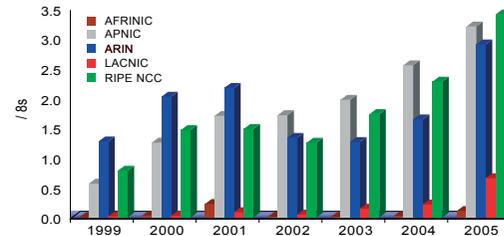
<https://www.ripe.net/ripe/docs/ripe-ncc-managed-address-space.html>

IPv4 Allocation

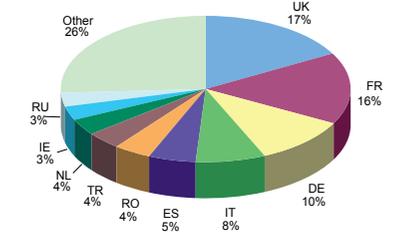
The Internet Assigned Numbers Authority (IANA) allocated three /8s to the RIPE NCC in 2005.

The RIPE NCC allocated address space equal to a /7, /8, /10, /11, /14 and a /16 (over 57 million IPv4 addresses) during 2005. This represents 3.4 /8s and is an increase of 49.8% compared with 2004. This is mostly due to an increase in the number of large allocations to providers of “always on” Internet connections. For more information see:

<https://www.ripe.net/info/info-services/addressing.html>



>> IPv4 allocations 1999-2005, per Regional Internet Registry



>> RIPE NCC IPv4 allocations 2005, per country

IPv6 Allocation

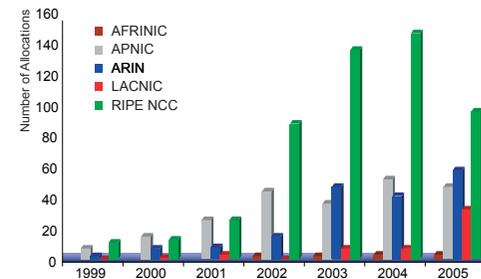
The IANA allocated address space equal to a /16, /18, and a /21 to the RIPE NCC in 2005.

The RIPE NCC made 94 /32 IPv6 allocations in 2005. This is a decrease of 36.05% compared with 2004, when 147 /32 allocations were made.

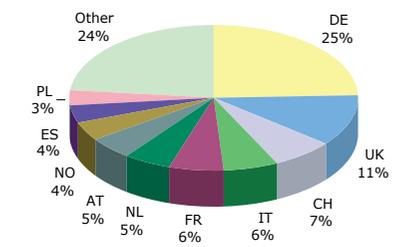
Since it started allocating IPv6 address space in 1999, the RIPE NCC has made 448 IPv6 allocations. By the end of 2005, 54 of the 55 /35 allocations that were made under the provisional IPv6 policy had been expanded to a /32 (the current minimum allocation size).

The RIPE NCC also made four allocations that were larger than the minimum /32 prefix length. These included two /19 allocations, one /22 and one /31. Four /48 assignments were made to Internet Exchange Points (IXPs) during 2005. For more information see:

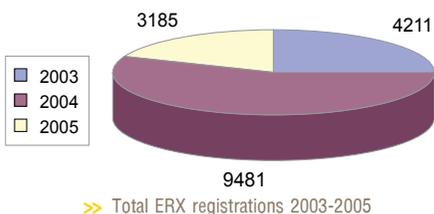
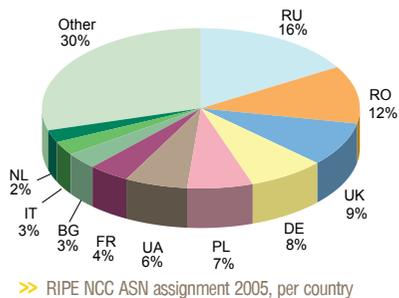
<https://www.ripe.net/info/info-services/addressing.html>



>> IPv6 allocations 1999-2005, per Regional Internet Registry



>> RIPE NCC IPv6 allocations 2005, per country

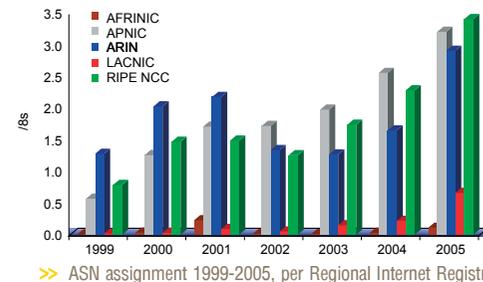


Autonomous System Numbers (ASN) Assignments

The RIPE NCC assigned 1,819 AS Numbers during 2005. This is an increase of 22.1%, compared with the 1,490 AS Numbers that were assigned during 2004.

This increase is largely due to assignments to networks in countries where there has been strong membership growth.

The IANA allocated one new block of 1,024 AS Numbers to the RIPE NCC in February and another in September 2005.



Early Registration Transfer (ERX)

The RIPE NCC started Early Registration Transfers (ERX) in August 2002, when it transferred AS Number registrations from the ARIN database to the RIPE Database. IPv4 registration transfers began in December 2002. The RIPE NCC completed the ERX project in 2005. The last transfer involved the former Class C registrations. In total, 45 /8s were processed. The transfer of the final /8 (192/8) was completed in April 2005. A total of 16,877 registrations were transferred during 2003 – 2005, with 3,185 of these in 2005.

More information about ERX can be found at:

<http://www.ripe.net/projects/erx/>

>> Training

RIPE NCC E-Learning Centre

In November 2005, the RIPE NCC E-Learning Centre was launched. Available to members and stakeholders from the public and private sectors, the RIPE NCC E-Learning Centre enables users to “learn in their own space, at their own pace”. The online courses aim to supplement the training courses provided by the RIPE NCC. The first module in the RIPE NCC E-Learning Centre introduced users to the RIPE Whois Database. Further modules will be developed based on feedback from users. More information about the RIPE NCC E-Learning Centre can be found at:

<https://e-learning.ripe.net>

RIPE NCC Training Courses

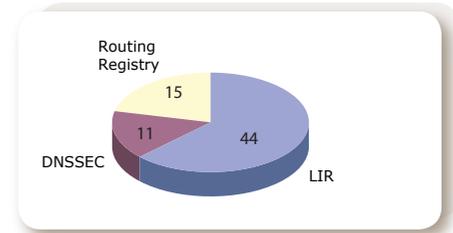
During 2005, the RIPE NCC offered three different types of training courses:

- The Local Internet Registry (LIR) Training Course trains members on how to request Internet resources and how to interact with the RIPE NCC. This course was restructured to include practical examples and was relaunched in June 2005.
- The Routing Registry (RR) Training Course is aimed at experienced network operators and explains the features of Routing Policy Specification Language (RPSL), the RR and related tools. The course includes interactive practical exercises and **demonstrations of tools**.
- The DNSSEC Training Course is aimed at experienced Domain Name System (DNS) operators and explains how to implement DNSSEC in an operational environment. It also includes information about the DNSSEC preparations completed by the RIPE NCC. The course will change in 2006 to focus more on reverse DNS procedures and other RIPE NCC DNS services.

All RIPE NCC training courses are regularly updated to include new policies and modifications to processes or software, and to ensure the information presented in the training courses is kept current. During 2005, courses were held in 31 countries throughout the RIPE NCC service region. In total, about 800 Local Internet Registry (LIR) staff members were trained.

A custom-made, one day RIPE NCC seminar that covered all three training courses was held alongside the RIPE NCC Regional Meeting in Moscow, 15-16 September 2005. The RIPE NCC also gave training courses at venues provided by host companies. For more information about RIPE NCC Training Services, see:

<http://www.ripe.net/training/>



>> Training Courses held in 2005

>> LIR Portal

The RIPE NCC Local Internet Registry (LIR) Portal is the web-based gateway that enables RIPE NCC members to interact with the RIPE NCC. Using the LIR Portal, members can:

- Update information, such as contact information or protected records in the public whois database
- Request resources or assignment approval, either through request forms or "wizards"
- Access information and tools, such as RIPE NCC Training Services and online registration for RIPE Meetings and Regional Meetings

In 2005, the RIPE NCC received over 3,000 requests, **23.2% of the total requests, for allocations and assignments via the LIR Portal. All other requests were made by e-mail.** Requests made through the LIR Portal provide the RIPE NCC with more relevant information up-front than requests made via e-mail. LIR Portal requests can be processed in approximately half the time of those sent by e-mail.

The LIR Portal is available to all RIPE NCC members and all members are encouraged to use it to communicate with the RIPE NCC whenever possible. Over 90% of LIRs have LIR Portal accounts. For more information see:

<https://lirportal.ripe.net/>

>> RIPE Policy Development in 2005

The RIPE NCC implements the Internet address distribution policies developed by community consensus in the RIPE Working Groups which hold open discussions on public mailing lists and at RIPE Meetings. In 2005, the RIPE Policy Development Process (PDP) was formalised. More information is available at:

<http://www.ripe.net/ripe/docs/pdp.html>

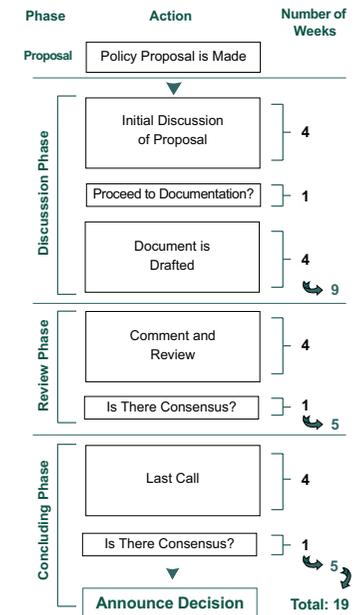
Twelve policy proposals were made during the year. More details about these proposals can be found at:

<http://www.ripe.net/ripe/policies/proposals/>

The RIPE Document Store lists recent changes to all RIPE Documents. This list is available at:

<http://www.ripe.net/ripe/docs/updates.html>

RIPE Policy Development Flowchart



>> Membership Liaison

Throughout 2005, the RIPE NCC carried out liaison activities and continued to offer support to all members in its service region. The key purpose of these activities is to communicate effectively with members about issues that affect them. Liaison activities also enable members to provide feedback, so the RIPE NCC can continuously evaluate and address the changing needs of its members.

The 2005 RIPE NCC Membership Survey

The 2005 RIPE NCC Membership Survey, conducted independently by KPMG, played an important role in the RIPE NCC's efforts in continuing to meet members' needs. The goal of the survey was to give all members the opportunity to voice their opinions and provide input on the RIPE NCC and the services it offers.

All individual responses were sent directly to KPMG to ensure confidentiality. The response rate to the survey was encouraging, with responses coming from 279 respondents in more than 50 countries. The overall outcome of the survey was generally positive, with members recognising the significant improvement in the RIPE NCC's services since the last survey that was carried out in 2002.

Improvements noted by respondents included:

- Better online documentation
- Improved resource request forms
- A simplified system for reverse DNS
- Enhanced support for RIPE Meeting attendees

Improvements to the RIPE NCC's finance and administration were also noted, such as:

- Revised "Standard Service Agreements" and "Terms & Conditions" documents
- The introduction of additional billing categories
- A new online payment system

Full details of the 2005 RIPE NCC Membership Survey can be found at:

<http://www.ripe.net/membership/survey2005/results/>



>> RIPE NCC Regional Meeting, Moscow, September 2005

RIPE NCC Regional Meetings

The RIPE NCC hosts Regional Meetings in order to actively include all parts of the RIPE NCC service region in its activities. One of the core aims of the meetings is to get direct feedback from the membership about region-specific issues. The meetings bring RIPE NCC members from a specific region closer to the RIPE NCC community and encourage their participation in RIPE Meetings, RIPE Working Groups and the policy-making process.

In 2005, the RIPE NCC held a Regional Meeting in Moscow, in September, which attracted 100 attendees. This was the second time a meeting had been held in Moscow. The success of the June 2004 Regional Meeting in Moscow prompted a return to the region.

More information about RIPE NCC Regional Meetings is available at:

<http://www.ripe.net/meetings/regional/>

>> Database Services

RIPE Whois Database

The RIPE NCC operates and maintains the RIPE Whois Database. The database contains information about IPv4 and IPv6 address allocations and assignments and AS Number assignments, as well as information about the organisations, contacts and DNS reverse delegations relating to them. It also contains an Internet Routing Registry. More information about the RIPE Whois Database can be found at:

<http://www.ripe.net/db/index.html>

During 2005, and as a result of discussions in the RIPE Database Working Group, the RIPE NCC made improvements to the whois database:

- Information about who to contact when reporting e-mail abuse was made easier to access.
- The default output to whois queries was changed to remove information that could confuse users.

Changes to the default output format are rare. The last change occurred in 2001. Other changes, such as the addition of an attribute that contains an e-mail address that can be used to report abuse, were also made. Full details of these changes can be found at:

<http://www.ripe.net/db/news/abuse-implemented-20050421.html>

Several minor changes were also made to support DNS Security (DNSSEC):

- A new attribute to store the delegation signer information for domains was added
- A time limit was introduced for updates sent to the database and signed with PGP or X.509 to prevent an unauthorised person from sending the same update later

More information about DNSSEC is available at:

<http://www.ripe.net/db/news/>

Whois Database Software

The software used for the RIPE Whois Database is published under an open source software license. This means that anyone can download it to use for their own purposes. In 2005, the RIPE NCC put public Concurrent Versions Systems (CVS) and Bugzilla servers online so that developers and other interested parties could use the latest version of the source code. They could also submit and track problems with the software. The RIPE NCC also released a new version of the software. More details can be found at:

<http://www.ripe.net/db/news/whois-3.3.0.html>

Whois Database Service and Support

In 2005, the RIPE Whois Database server was moved from a single server to a group of three servers. One server updates the database, while the two others answer queries to the database. This has made the service faster and more reliable.

The RIPE Database Reference Manual was also split into two separate manuals: one for queries and one for updates. The RIPE Whois Database Query Reference Manual was completed during 2005. Work to complete the RIPE Whois Database Update Reference Manual is ongoing. The RIPE Whois Database Query Reference Manual is available in the RIPE Document store at:

<http://www.ripe.net/ripe/docs/db-query-manual.html>

The RIPE NCC also supports all RIPE Database users by providing an e-mail helpdesk. The helpdesk can be contacted at:

ripe-dbm@ripe.net.

Improving Data Integrity

During 2005, the RIPE NCC continued to work on improving the quality of the data it publishes in the RIPE Whois Database and in various statistical overviews. Key areas of work included:

- Completion of Early Registration Transfer (ERX)
- Improvement to the way data is stored in the RIPE NCC's internal systems
- Updates of contact information for address space used by Local Internet Registries (LIRs) that have closed

Cross Registry Information Service Protocol (CRISP)

The most common way to get information from the RIPE Whois Database is by using the whois protocol. This has a number of limitations. CRISP is an Internet Engineering Task Force (IETF) Working Group created to design a protocol that addresses these limitations. More information can be found in the working group charter at:

<http://www.ietf.org/html.charters/crisp-charter.html>

The CRISP Working Group also created the Internet Registry Information Service (IRIS) protocol. It supports different types of registry information, such as domain information and IP address information. The protocol required new software to be installed on the RIPE NCC servers, and new client software for users. In 2005, the RIPE NCC put a prototype IRIS server online. It contains the same information that is held in the RIPE Whois Database and is accessible using the IRIS protocol. This means that the information is presented in a slightly different format. A web page was created for users to query the IRIS server. There is a client for users who want to query directly from their machine and a software library to help software developers write their own client. You can find more information about the RIPE NCC IRIS server at:

<http://www.ripe.net/db/iris-pilot/index.html>

>> DNS Services

As part of the technical support for allocated address space, the RIPE NCC provides primary and secondary Domain Name System (DNS) services for reverse domains. The RIPE NCC also provides a secondary DNS service for country code Top Level Domains (ccTLDs).

Other aspects of the DNS service include the operation of one of the world's root name servers (K-root), running the Tier-0 registry and the DNS service for the e164.arpa domain to support ENUM. To improve scalability and ease configuration management of reverse DNS, and to prepare for DNSSEC deployment, the RIPE NCC restructured its DNS service. Three servers were installed: one for distributing primary reverse DNS, one for secondary reverse DNS and one for secondary reverse for ccTLDs and secondary DNS services for other domains.

In August 2005, the forward zones were signed. In October 2005, the first reverse zones were signed (89/8 and 90/8). Secure delegations for these zones have been possible since October. During the last months of 2005, the RIPE NCC signed zones at a rate of around three per week.

Reverse Delegation

The RIPE NCC provides reverse domain delegations for allocated IPv4 and IPv6 address space. Together with the operation of the DNS root server, these continue to be the primary DNS activities carried out by the RIPE NCC. The RIPE Whois Database, the authoritative source for reverse zones, supports the management of reverse DNS. It also allows Local Internet Registries (LIRs) to maintain their reverse delegations themselves by updating information in the RIPE Whois Database.

In October 2005, the RIPE NCC began DNSSEC deployment in the reverse DNS tree by signing reverse zones. It also began supporting secure delegations in these zones. The first reverse zones to be signed were 89/8 and 90/8. More details about reverse delegation are available at:

<http://www.ripe.net/reverse/>

Secondary DNS

The provision of secondary DNS service ensures the reliability and robustness of the general DNS infrastructure and forms an important part of the overall DNS service. The RIPE NCC provides the secondary DNS service for the reverse zones of other Regional Internet Registries (RIRs) and to some ccTLD organisations, mainly those in developing countries, upon request. The RIPE NCC offers this service free of charge. At the end of 2005, the RIPE NCC was providing a stable secondary DNS service to 100 ccTLDs.

K-root

The RIPE NCC operates one of the world's root name servers. These 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 five globally available nodes and 12 nodes with local availability, all operated by the RIPE NCC.

The five global nodes are located at:

- London, United Kingdom
- Amsterdam, the Netherlands
- Tokyo, Japan
- Miami, United States
- Delhi, India

After completing this phase of anycast deployment, the RIPE NCC began research into better understanding the impact of the anycast network on the service that the RIPE NCC provides and the strategy for expanding the K-root anycast network in the future. More information about K-root can be found at:

<http://k.root-servers.org>

ENUM

The RIPE NCC runs the Tier-0 registry and provides DNS service for the e164.arpa domain on behalf of the Internet Architecture Board (IAB). ENUM is the Internet Engineering Task Force (IETF) standard, as described in RFC2916, to map telephone numbers according to the International Telecommunication Union (ITU) standard E.164, into the Domain Name System (DNS). The e164.arpa domain is the root of the ENUM namespace in the global DNS. The RIPE NCC follows the IAB instructions to provide the DNS name service for e164.arpa. These instructions can be found at:

<http://www.ripe.net/enum/instructions.html>

The RIPE NCC delegates domains for E.164 country codes to entities requesting them (Tier-1 registries) 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. More information can be found at:

<http://www.itu.int/ITU-T/inr/enum/procedures.html>

In 2005, the RIPE NCC made ten delegations within the e164.arpa zone following approval received from the ITU-T TSB. At the RIPE 51 Meeting in Amsterdam, the RIPE NCC agreed to work on improving the quality of DNS in the e164.arpa DNS tree. More details can be found at:

<http://www.ripe.net/enum/>



>> Press conference at the launch of the RIPE NCC operated root server in India, August 2005

>> Deployment of Internet Security Infrastructure (DISI)

During 2005, Deployment of Internet Security Infrastructure (DISI) focused on the security of the Domain Name System (DNS) by deploying DNS Security (DNSSEC). Early in 2005, the Internet Engineering Task Force (IETF) finished the development of the DNSSEC protocol by publishing RFC4033 to RFC4035.

The RIPE NCC established a taskforce to deploy DNSSEC on the forward zones (ripe.net, ripencc.net and others) and reverse zones (193/8 and others) under the RIPE NCC's control. As part of this project, the DNS infrastructure was upgraded to support DNSSEC, key maintenance infrastructure and procedures were established and tools for the exchange of key information between child and parent were developed and deployed. Key management policies and procedures were developed in collaboration with the community.

Part of DISI's mission is to provide white papers and tutorials that help to ease the deployment of DNSSEC. In 2005, the RIPE NCC updated its "DNSSEC HOWTO" tutorial to comply with the protocol description and software. This document is available at:

<http://www.ripe.net/disi>

The RIPE NCC continued to maintain the Net::DNS::SEC module to provide DNSSEC support for tool developers. This module is available at:

<http://search.cpan.org/~olaf/>

>> Routing Information Service (RIS)

The RIS collects and stores Border Gateway Protocol (BGP) routing information. It also offers tools that can be used to search and analyse this information. The routing information and the tools can be used by anyone. The RIS has several Remote Route Collectors (RRCs) located at different collection points around the world. In 2005, two new RRCs were added, bringing the total number to 14. Together, these RRCs facilitated over 500 peering sessions.

The online RIS database stores data over a three-month period. In addition, all data collected since the project started in 1999 is available in a raw format. Because of the number of RRC collection points and long-term data storage, the RIS gives an overview of Internet routing from different locations over an extended period of time.

In 2005, the RIS web-based tools were rewritten and now support IPv6 searches. The central server was redesigned and split into two servers. This allowed more routing data to be stored without slowing down the RIS database. More information about the RIS, including links to tools and data, can be found at:

<http://www.ripe.net/projects/ris/>

>> Active Measurements

Test Traffic Measurements (TTM) Service

The TTM service is designed to reliably and impartially measure end-to-end performance characteristics of the inter-provider Internet. This is achieved by installing test-boxes at participating sites. These test-boxes send measurement traffic to each other.

From this traffic, packet losses, delays and other parameters are determined according to the metrics developed by the Internet Engineering Task Force (IETF) IP Performance Working Group.

In 2005, the RIPE NCC continued to participate in this working group, with one of its staff members acting as co-chair. The test-boxes are also used for the RIPE NCC DNSMON service. A total of seven test-boxes were ordered during 2005; five new test-boxes were provided and two were replaced with new hardware. The RIPE NCC continued to fine-tune the configuration of the test-boxes for the ongoing task of improving the resilience of the TTM service. Monitoring of test-boxes has also been improved.

New timekeeping software was also added to the TTM service. This feature improves delay measurements. This feature was also considered necessary for the introduction of bandwidth measurements. The possibility to routinely measure capacity and available bandwidth between test-boxes using non-intrusive tools has been discussed in the community during the last few years. While considerable progress had been made in this field, there are currently no tools available that are suitable to routinely undertake large numbers of measurements. Therefore, the RIPE NCC decided to abandon the bandwidth measurement project.

Together with the RIPE Test Traffic Working Group, the RIPE NCC has been investigating which other measurements can be done using the TTM infrastructure. This resulted in two RIPE Policy Proposals (2005-10 and 2005-11) being submitted.

These proposals can be found at:

<http://www.ripe.net/ripe/policies/proposals/2005-10.html>

<http://www.ripe.net/ripe/policies/proposals/2005-11.html>

Further information about the TTM service can be found at:

<http://www.ripe.net/ttm>

DNS Monitoring (DNSMON)

DNSMON was developed between 2003 and 2005. DNSMON uses Test Traffic Management (TTM) test-boxes to provide an objective and up-to-date service overview of DNS root servers and participating Top-Level Domain (TLD) name servers. The measurements show the availability of root servers and are presented so that the user can distinguish between server-side and client-side problems.

DNSMON has been available as a fully supported service since April 2005. There are two levels of service:

- A higher service level offered to TLD operators as part of the TTM service (against a cost recovery fee)
- A lower service level available for free to the entire Internet community

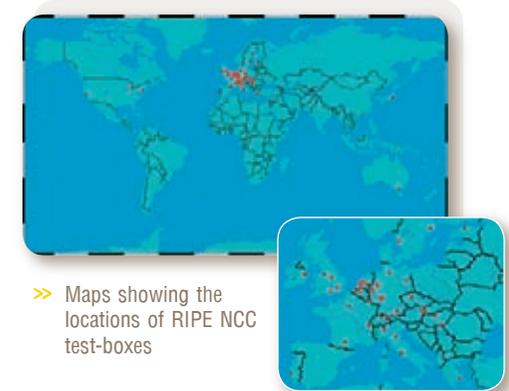
The main differences between the services are in the delay between data collection and presentation and in the level of support offered by the helpdesk. Currently, 20 TLD operators are using the DNSMON service.

The service is described in more detail in RIPE Document RIPE 342, available at:

<http://www.ripe.net/ripe/docs/dnsmon.html>

More details about DNSMON are available at:

<http://dnsmon.ripe.net>



>> Maps showing the locations of RIPE NCC test-boxes

>> Statistics on Internet Development

During 2005, the RIPE NCC continued to collect statistics on Internet development. The purpose of this is to provide authoritative data and reports to a wide range of users, including network operators, RIPE Working Groups, industry bodies, governments and the media.

Hostcount

Every month, the RIPE NCC coordinates the collection of data from the DNS zones of TLDs in the RIPE NCC service region and publishes summary statistics derived from this data. This activity has been performed since 1993, making it one of the longest running data collection efforts on, and about, the Internet. In 2005, the accuracy and usability of the Hostcount was reviewed. A report, with suggestions for improvements, was presented to the community at the RIPE 50 Meeting in Stockholm. Implementation of this proposal began in 2005.

The presentation can be found at:

<http://www.ripe.net/ripe/meetings/ripe-50/presentations/ripe50-serv-hostcount.pdf>

ASN Missing in Action (ASN-MIA)

In 2005, the RIPE NCC conducted a study on the consumption of AS Numbers (ASNs). It compared the ASN assignments by the five Regional Internet Registries (RIRs) with the number of unique ASNs seen by routers on the Internet.

A report was published as RIPE Document RIPE 353 and is available at:

<http://www.ripe.net/ripe/docs/ripe-353.html>

By 1 August 2005, 33,000 ASNs had been assigned by the RIRs. Currently, 284 ± 43 ASN are assigned by the RIRs each month. If this rate of assignment continues, the pool of available ASNs could run out somewhere between 2013 and 2016. At the same time, the routing table is only growing by 183 ± 44 ASN per month.

There are two reasons for this disparity:

- ASNs are being requested based on future expansion plans, meaning some are never actually used
- ASNs that are no longer in use are being retained by Local Internet Registries (LIRs)

If all unused ASNs could be recovered, the available pool could last until somewhere between 2025 and 2030. If they cannot be recovered, Internet Service Providers (ISPs) need to think about deploying 4-byte ASNs.

The policy proposal for this is available at:

<http://www.ripe.net/ripe/policies/proposals/2005-12.html>

>> About RIPE

RIPE (Réseaux IP Européens) is a collaborative forum open to all parties interested in wide area IP networks. The objective of RIPE is to ensure the administrative and technical coordination necessary to enable the operation of the Internet. There are no membership requirements for participation in RIPE. Activities are performed on a voluntary basis and decisions are formed by consensus.

The work of the RIPE community is carried out within a variety of working groups. Each of these RIPE Working Groups has one or more mailing lists where relevant topics are discussed. The RIPE community provides the most important source of public input to the RIPE NCC and also plays a significant role in the development of the annual RIPE NCC Activity Plan.

Policies regarding IP administration are created within RIPE, primarily in the Address Policy Working Group. The RIPE NCC does not set policies but ensures the consistent application of policies within its service region. More information about RIPE is available at:

<http://www.ripe.net/ripe>

RIPE Meeting Support

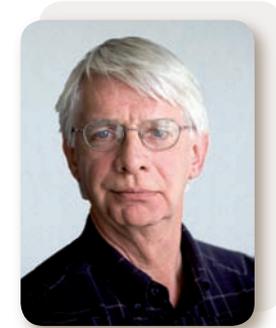
Although they are two distinct entities, RIPE and the RIPE NCC are interdependent in their operations. The RIPE NCC is committed to supporting the bottom-up, industry self-regulatory structure developed by the RIPE community. It provides administrative support for RIPE and facilitates the organisation of RIPE Meetings.

RIPE Meetings are open meetings where technical and policy issues affecting Internet administration and operations specific to IP networking are discussed. Network operators meet at RIPE Meetings to discuss technical coordination matters. The RIPE Working Groups gather in dedicated sessions at RIPE Meetings to discuss current challenges and to develop solutions.

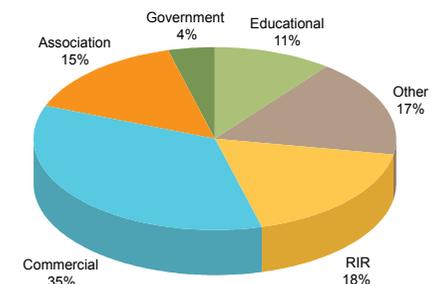
To increase awareness and involve parts of the RIPE NCC membership and the RIPE community in RIPE Meetings, support is provided for those who cannot attend. This includes webcasting selected sessions and the facilitation of feedback mechanisms such as Internet Relay Chat (IRC) and Jabber. This allows RIPE NCC members and the Internet community not present at the meeting to follow, and contribute to, important discussions.

In 2004, Rob Blokzijl, RIPE Chair, proposed that two RIPE Meetings would be held in 2005 as opposed to three. Based on feedback from the community, the schedule of bi-annual RIPE Meetings will continue. The RIPE NCC offers continued support to RIPE Working Groups to facilitate discussion and progress during the periods between RIPE Meetings by facilitating mailing lists and providing newsletters and announcements. More information about RIPE Meetings can be found at:

<http://www.ripe.net/ripe/meetings/>



>> Rob Blokzijl, RIPE Chair



>> Attendance at the RIPE 50 and RIPE 51 Meetings, per industry sector



RIPE Meetings During 2005

RIPE 50	02–06 May	Stockholm, SE
RIPE 51	10–14 October	Amsterdam, NL

4 >> The RIPE NCC and the NRO



>> RIPE NCC and the Number Resource Organization (NRO)

The Number Resource Organization (NRO) was established in October 2003 and is made up of the five Regional Internet Registries (RIRs). The NRO carries out the joint activities of the RIRs, including joint technical projects, liaison activities and policy coordination. Its main goals are to protect the unallocated Internet number resource pool, to promote and protect the bottom-up policy development process and to act as a focal point for Internet community input into the RIR system.

The NRO does not develop, approve or implement regional or global number resource policies. The RIRs administer and facilitate policy in their regions using established open policy development processes. With input from the RIRs via the NRO, the Address Supporting Organization (ASO) reviews and develops recommendations on global IP address policy ratification by the Internet Corporation for Assigned Names and Numbers' (ICANN) Board of Directors.

The NRO Executive Council consists of the Chief Executive Officer of each RIR. Officer positions rotate annually. In 2005, the officers were: Chairman, Axel Pawlik (RIPE NCC); Secretary, Raúl Echeberría (LACNIC); Treasurer, Ray Plzak (ARIN); Members, Adiel Akplogan (AfriNic) and Paul Wilson (APNIC).

Over the course of 2005, much of the work of the NRO involved active participation in Internet governance forums, especially the World Summit on Information Society (WSIS). The NRO presented regular statistical reports and coordinated engineering work including projects dealing with 6-to-4 reverse DNS services and common registry protocols. The NRO also facilitated globally coordinated policy developments through the various regional communities.

To support the NRO's activities, two groups, consisting of RIR staff, were established in 2004. The Communication Coordination Group (CCG) focuses on communication and public relations. The Engineering Coordination Group (ECG) ensures that engineering projects are globally coordinated. The CCG and the ECG ensure efficient and effective coordination between the five RIRs.

The NRO also continued to work together with a number of key organisations that are responsible for both day-to-day management and policy development in the Internet sphere. The purpose of these collaborative efforts was to promote a greater understanding of existing Internet governance mechanisms and how these relate to the recommendations of the Working Group on Internet Governance (WGIG) Final Report and wider WSIS principles. More information about the NRO can be found at:

<http://www.nro.net/>

5 >> The RIPE NCC and AfriNIC

>> RIPE NCC and AfriNIC

AfriNIC is the African, not-for-profit organisation proposed by the African community to manage Internet number resources in Africa. On 8 April 2005, AfriNIC became a fully recognised Regional Internet Registry (RIR). The RIPE NCC offered substantial support to AfriNIC during its set-up as an RIR. This included hosting AfriNIC staff at the RIPE NCC offices so that they could gain hands-on experience of the various activities carried out by an established RIR.

As part of the transition process, AfriNIC and the RIPE NCC co-evaluated resource requests between September 2004 and February 2005. In early 2005, all data and documentation relating to assignments in the African part of the RIPE NCC's service region were transferred to AfriNIC. Essential software tools to manage this data were supplied jointly by the RIPE NCC and ARIN.

On 21 February 2005, AfriNIC became fully operational as an RIR. The RIPE NCC ended the membership of all its members from the African continent on 31 December 2005. Termination of RIPE NCC membership was executed in accordance with the RIPE NCC Articles of Association. The RIPE NCC Standard Service Agreement was also terminated for African countries on 31 December 2005. All claims for payment of outstanding service fees and all membership data were permanently transferred to AfriNIC. The RIPE NCC kept historical data for archiving purposes.

To guarantee a stable and operational global RIR system, the RIPE NCC continues to take a close interest in AfriNIC and to offer AfriNIC its full support.

For more information about AfriNIC, see:

<http://www.afrinic.net>



>> Adiel A. Akplogan, CEO AfriNIC (centre) being congratulated as AfriNIC celebrates becoming the fifth Regional Internet Registry





» FINANCIAL REPORT

two thousand

05

>> STATEMENT OF INCOME AND EXPENDITURE 2005

in kEUR	Actual Year 2005	Budget 2005	Actual Year 2004	Difference FY05 vs Bud FY05		Difference FY05 vs FY04	
<u>Income</u>							
Fee	11,789	10,872	11,997	917	8%	(208)	-2%
RIPE Meeting	243	184	289	59	32%	(46)	-16%
Other income	72	150	151	(78)	-52%	(79)	-52%
Total Income	12,104	11,206	12,437	898	8%	(333)	-3%
<u>Expenditures</u>							
Personnel	5,857	6,130	5,676	(273)	-4%	181	3%
Operational expenses	2,327	2,988	2,247	(661)	-22%	80	4%
RIPE Meetings	455	279	469	176	63%	(14)	-3%
LIR courses	269	281	281	(12)	-4%	(12)	-4%
Regional meetings	54	112	114	(58)	-52%	(60)	-53%
Depreciation	468	633	500	(165)	-26%	(32)	-6%
Subtotal expenses	9,430	10,423	9,287	(993)	-10%	143	2%
Surplus before misc. costs & financial expenses	2,674	783	3,150	1,891		(476)	
Miscellaneous costs	263	550	691	(287)	-52%	(428)	-62%
Financial expenses	(273)	(269)	(239)	(4)	-2%	(34)	-14%
Total expenses	9,420	10,704	9,739	(1,284)	-12%	(319)	-3%
Surplus / Deficit	2,684	502	2,698	2,182	435%	(14)	-1%

>> BALANCE SHEET as at 31 DECEMBER 2005

in kEUR

ASSETS

Fixed assets

	31 DECEMBER 2005		31 DECEMBER 2004
Computers	883		388
Infrastructure	173		204
Office equipment	79		113
Total fixed assets	1,135		705

Current assets

Accounts receivable	2,761		3,248
VAT	23		35
Miscellaneous receivables	609		474
Total current assets	3,393		3,757

Cash on hand

17,300	15,123
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Total ASSETS

21,828	19,585
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LIABILITIES

Capital

Reserves	477		477
Clearing House	9,509		6,811
Surplus	2,684		2,698
Total capital	12,670		9,986

Current liabilities

Creditors	416		83
Wage taxes & social securities	141		143
Unearned revenues	7,767		8,004
Personnel fund	(161)		330
Miscellaneous payables	995		1,039
Total current liabilities	9,158		9,599

Total LIABILITIES

21,828	19,585
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» Notes to the RIPE NCC Statement of Income and Expenditure 2005

General Information

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

The financial year 2005 resulted in a surplus of 2,684 kEUR. This positive result is due to a higher than expected income from membership growth and the effective control of expenses. This surplus increases the RIPE NCC reserves above the level that is equivalent to one year's operating expenses for the RIPE NCC. This target was set by the RIPE NCC Executive Board and the RIPE NCC Management for the financial stability and the continuity of the RIPE NCC. For 2006, the level of reserves has been budgeted to decrease towards a level equivalent with one year's operating expenses.

Revenues

Revenues were 3% below 2004 and 8% above the budgeted income for 2005. The income from service fees in 2005 was less than in 2004 due to a substantial decrease in fees, even though there was a positive effect from the increased number of members.

The total membership increased to 4,210, a 10% growth compared to 2004. The total number of new members applying in 2005 was 684. Due to closed members and applicants that never became members, the net growth for 2005 was 386 members.

Compared to 2004, income from the service fee includes the revenues received from late payments for previous years and late payment charges. In previous years, these items were listed as 'Other Income'.

The RIPE Meeting fee income was less than 2004, but well above budgeted income. This is a result of the change from holding three RIPE Meetings per year to two RIPE Meetings per year in 2005. The attendance at the two RIPE Meetings in 2005 was substantially higher than expected. 'Other Income' contains Test Traffic Management (TTM) Service fees, DNSMON income and EU VAT reclamations from 2004 that were submitted in 2005, and a revaluation of the Internet Corporation for Assigned Names and Numbers (ICANN) accrual.

Expenditures

Total expenditure in 2005 was 3% less than total expenditure in 2004. The main reason for the decrease in expenditure was a decrease in 'Miscellaneous Costs' caused by a repayment from the RIPE NCC Personnel Fund. Personnel expenses increased slightly from 2004, but were still well below the 2005 budget. For the full year, 90.6 FTEs were employed compared to 90.5 FTEs for the year 2004 and 92.5 FTEs budgeted for 2005. The number of FTEs is calculated on the basis of the number of days (as defined by social security benchmarks) worked by employees. Operational expenses increased due to additional postage expenses and the increased ICANN contribution for 2005.

RIPE Meeting expenses increased from the budget as a result of the high number of attendees at both RIPE Meetings in 2005. Only one Regional Meeting was held in 2005 compared with two in 2004 and budgeted for 2005.

Miscellaneous costs consist of bad debts and RIPE NCC Personnel Fund expenses. Bad debts were 423 kEUR versus 361 kEUR in 2004. In 2005, the liability to the Personnel Fund was -161 kEUR for 2005, substantially lower than 2004, as a result of a decrease in the number of employees with indefinite contracts.

Financial expenses include bank charges and interest received on current and deposit accounts. Due to the RIPE NCC's new online payment system, bank charges increased as credit card charges are now charged to the RIPE NCC and are accounted as an expense. With the increased cash deposit level, the interest received from deposit accounts increased over 2005.

>> Notes to the RIPE NCC Balance Sheet as per 31 December 2005

General Information

All amounts are expressed in kEUR. Foreign currencies are converted at the daily exchange rate at the date of transaction or valuation. Historic costs have been used throughout unless otherwise stated.

Assets are valued at historical cost and are depreciated on a straight-line basis, starting in the month after acquisition. Computers consist of hardware and activated software. Hardware is written-off in three years while software is written-off in two years. Infrastructure is written-off in three years and office equipment in five years. All items under EUR 1,000 are expensed.

Current Assets

Accounts receivable decreased in comparison with 31 December 2004, due to the timely sending of quarterly and half-yearly invoices and due to the decrease in service fees for 2006. In 2005, in contrast to previous years, a re-statement was made for all extra payments or over payments by members to the RIPE NCC. This amounts to 163 kEUR and is reported as 'creditors'.

Suspense accounts are stated as accounts receivable. Suspense accounts are payments received from members where the origin of the payment is not yet clear.

Miscellaneous receivables include pre-payments for rent, equipment, pension, health and deposits for securing RIPE Meeting venues. Other items listed under miscellaneous receivables are interest receivable, fees to be received, payments in transit and long-term receivables. In addition, miscellaneous receivables for 2005 include a small inventory for the sale of K-root equipment and TTM equipment.

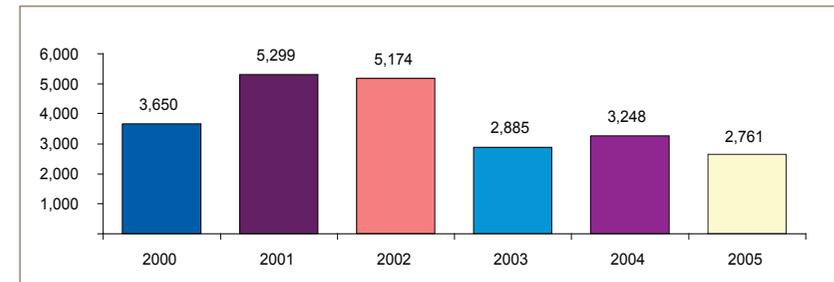
Capital

Until 1998, surpluses were accumulated in the RIPE NCC reserves. In 1998, the RIPE NCC agreed with the Dutch tax authorities on a tax ruling that allows surpluses to be deposited tax-free into a Clearing House. All yearly surpluses since 1998 have been allocated to the Clearing House. In 2004, the Clearing House ruling with the tax authorities was revised so that the Clearing House applied to all members as a group and not as individuals. This was approved at the RIPE NCC General Meeting in May 2004. Currently, the maximum reserve in the Clearing House is limited to three times the service fees received from the members.

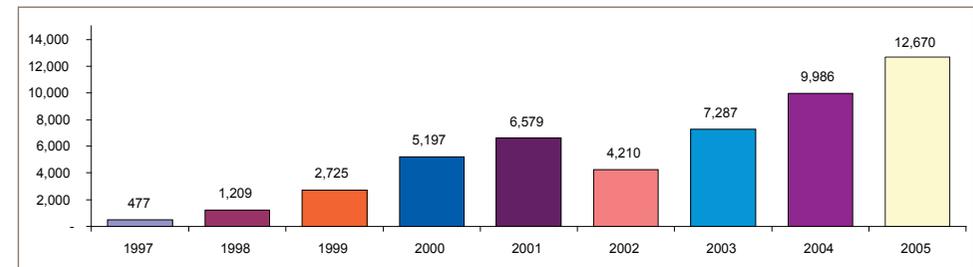
>> Fixed Assets

	Computers	Infrastructure	Office equipment
Book value 1/1/2005	388	204	113
Purchase costs	543	86	11
Depreciation	48	117	45
Book value 31/12/2005	883	173	79

>> Accounts Receivable



>> Capital Development



>> Current Liabilities

Wage taxes and social securities	31/12/05	31/12/04
Wage taxes	128	123
Social Securities	13	20
Total wage taxes and soc. sec.	141	143

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7 kEUR is restated from the creditors to the accounts receivable at 31 December 2005. This refers to credit notes receivable from creditors. The unearned revenues consist of invoices sent in 2005 but pertaining to 2006. The substantial decrease in service fees for the year 2006 has resulted in a moderate decrease in unearned revenues, even though the membership grew considerably over the year 2005, from 3,824 to 4,210 members.

In 2004, the RIPE NCC changed the wage tax filing period from quarterly to monthly. Therefore, at year-end 2005, only the December payment was still due.

Miscellaneous payable	31/12/05	31/12/04
Accrued ICANN contribution	633	447
Accrued holiday allowance/ vacation days	295	293
Other payables	67	299
Total miscellaneous payable	995	1,039

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Miscellaneous Payables

The miscellaneous payables include accrued holiday allowance and accrued vacation days. This amount is based on the number of outstanding vacation days at 31 December 2005 and valued at the December 2005 salary. In comparison to 2004, miscellaneous payables exclude the unearned revenue for African members. This was included in "Other Payables" in 2004. At year-end 2004, this amounted to 201 kEUR. In the course of 2005, the payments received were transferred to the Regional Internet Registry (RIR) for the African region, AfriNIC.

Items Not Shown in Balance Sheet

The RIPE NCC rents office space in two buildings and has two separate rental agreements for these. Two bank guarantees have been issued for an amount of 131 kEUR to cover a quarter of the rent of the office space. These rental agreements were re-negotiated in 2005 and were extended until December 2008 and 2009.

Currently, the RIPE NCC has no liabilities or obligations towards the Number Resource Organization (NRO) and all items were settled at year-end 2005. There is no material interest in the NRO that needs to be noted in the financial statements.



Auditors' report

Introduction

In accordance with your instructions, we have audited the financial statements of Réseaux IP Européens Network Coordination Centre (RIPE NCC), Amsterdam for the year 2005 as set out on pages 26 to 30. These financial statements are the responsibility of the management of the association. Our responsibility is to express an opinion on these financial statements based on our audit.

Scope

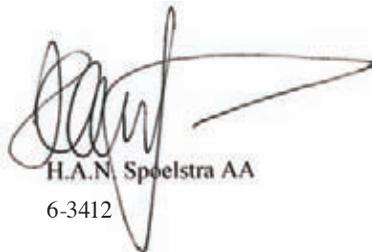
We conducted our audit in accordance with auditing standards generally accepted in the Netherlands. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audit provides a reasonable basis for our opinion.

Opinion

In our opinion, the financial statements give a view of the financial position of the company as at 31 December 2005 and of the result for the year then ended as is required in this case in accordance with the accounting policies as defined to the financial statements.

Amstelveen, 31 March 2006

KPMG ACCOUNTANTS N.V.



H.A.N. Spoelstra AA
6-3412

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