# RIPE NCC Activity Plan 2008

*RIPE NCC*

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# Section A: RIPE NCC Vision and Focus

# 1. Vision and Strategy

The RIPE Network Coordination Centre (RIPE NCC) is an independent, not-for-profit membership organisation that serves a membership base of over 5,000 members in 75 countries across Europe, the Middle East and parts of Central Asia. The RIPE NCC operates under the principles of openness, transparency, neutrality and impartiality. All member and coordination services offered by the RIPE NCC are based on the input and needs of the RIPE NCC members and the RIPE community.

For 15 years, the RIPE NCC has been successful in providing administrative and technical coordination to the Internet community. An important aspect of this technical coordination is the RIPE NCC's established function as a Regional Internet Registry. This function includes the reliable and stable allocation of Internet number resources to its members, the responsible storage and maintenance of this registration data and the provision of an open, publicly accessible database where this data can be accessed.

The next five years will see a significant change in the global Internet landscape and in particular in the Internet registry system, as the remaining IPv4 address space is allocated. Against a likely backdrop of increased demand for resource trading and creating an even greater motivation for the certification of Internet resources, this new environment may have a serious impact on the operations of the RIPE NCC. The organisation will need to evolve to remain capable of performing the administrative and technical coordination of the Internet on behalf of its members and the RIPE community.

During 2008, the Executive Board of the RIPE NCC, together with its Senior Management, will continue to develop a long-term strategy for enabling this evolution. This strategy could result in significant changes to the RIPE NCC's funding structure, membership figures, registry function and coordination activities. However, the stability and continuity of services and support continue to be one of the top priorities. The RIPE NCC will ensure that it coordinates strategy where necessary with the other RIRs.

The RIPE NCC will continue preparations for, and deployment of, the certification of Internet resources. The RIPE NCC will place an even greater emphasis on the quality of registry data and will incorporate a renewed focus on registration data quality into its work on certification of Internet number resources. The primary goal of these activities is to provide an enhanced registry function adapted to the changing needs in the RIPE region. The driving force behind the RIPE NCC's registry function will remain its members' need for reliable and secure Internet address space.

The RIPE NCC will remain a membership-based organisation. Its primary focus will continue to be on performing activities that support the operations of its members and the activities of network operators throughout its service region. As part of its evolution, the RIPE NCC will ensure that it is prepared to perform any enhanced or new coordination activities as requested by its members or the RIPE community.

# 2. RIPE NCC Focus Points

### Reliable and Stable Technical Coordination of Internet Number Resources

The RIPE NCC will improve the consistency and strengthen the stability of the processes for distributing Internet number resources to members. This will enable the RIPE NCC to allocate Internet number resources with stable service time and improved data accuracy.

There will be a specific focus on the public registration data stored in the RIPE Database. The aim will be to improve the accuracy, consistency and completeness of the data related to Internet number resource distribution.

### Support for Internet Number Resource Certification

The RIPE NCC will continue to prepare for the possibility of issuing certificates for Internet number resources. The focus will be on investigating the technological, administrative and procedural elements necessary to certify Internet number resources and to ensure that the RIPE NCC's preparations respond to, and incorporate, any relevant policy-based developments.

### High Quality Information Services for Operators and the Internet Community

As a neutral and credible source of statistics on the performance and operation of Internet networks, the RIPE NCC supplies a range of Information Services. These services, which include Test-Traffic Measurements (TTM), the Routing Information Service (RIS), Hostcount and DNS Monitoring (DNSMON), provide up-to-date, high-quality data. The RIPE NCC will focus on improving the quality of this data and the speed and manner with which it is collected, processed and presented. In addition, the RIPE NCC will further develop the user-interfaces and documentation of these services while consolidating them so that they are easier to use.

*External Relations*

The RIPE NCC has been called upon by different entities in the public sector (ranging from individual governments to the United Nations) to continue providing support for the technical coordination of the Internet. As a result, the RIPE NCC will continue its successful coordination work with the other RIRs, industry bodies and governments.

The RIPE NCC has received positive recognition for its contribution to the World Summit on the Information Society (WSIS), held from 2003-2005, and the ongoing Internet Governance Forum (IGF). These experiences have demonstrated that the RIPE NCC's public affairs contributions are valuable and should continue. The focus is on enhancing public/private sector dialogue and demonstrating the importance of the RIR system to the public and private sectors.

A crucial area in this respect is the future exhaustion of IPv4 address space and the related issues of global and regional fairness. The RIPE NCC will develop relationships in the public sector, promoting the public/private dialogue required to deal with these issues and the impact they will have on the Internet community. As part of these efforts, the RIPE NCC will continue its Roundtable Meetings for Governments and Regulators, which have proved an effective way of promoting the RIR system, gaining valuable feedback and encouraging public/private sector dialogue.

# 3. New or Significantly Developed Activities for 2008

*Note:* Information about the budgeted costs for these activities is available in the RIPE NCC Budget 2008:
http://www.ripe.net/ripe/docs/budget2008.html

## *Support for Internet Number Resource Certification*

The RIPE NCC's certification related activities will build on the work carried out on routing security over 2006-2007. The RIPE NCC will continue to track relevant routing security and certification proposals in consultation with the other RIRs and the RIPE community.  This work will be periodically presented to RIPE NCC members and the RIPE community. The RIPE NCC will gather their feedback and incorporate their input and expertise into the continued work towards supporting Internet number resource certification.

An important consideration will be to ensure that the RIPE NCC is prepared for changes in the industry that will take place once the remaining IPv4 address space has been completely allocated. The primary concern will be to continue providing a stable and secure registry function where registry data is maintained with a high level of accuracy. With the changing Internet landscape, the RIPE NCC will enhance its registration services so that they are capable of handling the transfer of Internet resources should this be required by RIPE NCC members and the RIPE community.

As in the past, the registry function provided by the RIPE NCC will incorporate all procedural and technical elements that are needed in order to implement policies concerning IP address registration that are developed by the RIPE community.

## 4. Closure or Reduction of Activities

The Deployment of Internet Security Infrastructure (DISI) activity has been integrated into activities focused on DNS Security (DNSSEC) and ongoing work on the certification of Internet number resources. As a result, the separate section on DISI (Section B:2.4 in the RIPE NCC Activity Plan 2007) has been removed from the list of the RIPE NCC's Ongoing Activities for 2008).

At the time of writing, the RIPE NCC does not foresee the closure or reduction of any other service or activity.

## 5. RIPE NCC Ongoing Activities

Information on the RIPE NCC's ongoing activities (Membership Services, Coordination Activities and Information Services) is available in Section B of this document, RIPE NCC Ongoing Activities.

## 6. Unforeseen Activities

The RIPE NCC will keep a reserve of resources to take up any activities that appear necessary during the course of the year. These activities are entirely unforeseen at the time of writing the RIPE NCC Activity Plan 2008 or have started recently and are not at the stage where they can be quantified as a budgeted activity. A quick, well-focused reaction to the changing environment and new requirements of the RIPE NCC members and other stakeholders has always been a strong point of the RIPE NCC.

# Section B: RIPE NCC Ongoing Activities

## 1.0 Membership Services

The RIPE NCC aims to exceed its members' service expectations in the distribution of Internet resources. The purpose of these distribution activities is:

- To provide a fair, impartial distribution of Internet number resources guided by the RIPE community policies based on the goals of uniqueness, conservation and aggregation
- To actively maintain an accurate resource registry
- To provide accurate and valid Internet Registry resource data
- To support the RIPE community's bottom up, industry self-regulated model and the RIPE Policy Development Process (PDP)
- To provide guidance for internal procedures

## 1.1 Distribution and Management of Internet Number Resources

In its role as a Regional Internet Registry (RIR), the RIPE NCC provides allocation and registration services to Local Internet Registries (LIRs) in Europe, the Middle East and Central Asia. The overall goal of the RIPE NCC's allocation and registration services is to provide fair, impartial and stable distribution of Internet number resources in its service region. The specific goals for the distribution of IP address space are:

- Uniqueness of IP addresses
- Aggregation of routing information
- Conservation of IP address space
- Procedure and policy definition for IP address space
- Registration of network management and contact information

### 1.1.1 IPv4 / IPv6 Address Space and Autonomous System (AS) Numbers

**Description of Activity:**
The RIPE NCC allocates and assigns Internet number resources according to RIPE community policy.

The RIPE NCC allocates and assigns IPv4 and IPv6 address space to RIPE NCC members and other network operators. The RIPE NCC also assigns AS Numbers and registers these numbers and the initial associated routing policy, ensuring the uniqueness of AS Numbers and collecting data for the Routing Registry. From 2007, the RIPE NCC has assigned AS Numbers from both the 16-bit and 32-bit pools.

**Goal of Activity:**

- To ensure the fair distribution of Internet number resources
- To ensure the efficient use of IP address space and AS Numbers
- To facilitate the optimal aggregation of routing information
- To support members with the processes and procedures

## 1.1.2 Auditing and Data Accuracy

**Description of Activity:**
The RIPE NCC actively checks the quality and validity of Internet resource registry data. To ensure fair address space distribution, the RIPE NCC checks that appropriate assignment decisions are made. The RIPE NCC also makes regular reports on these activities to the RIPE community as well as producing statistics on address space usage.

**Goal of Activity:**

- To promote a consistent and fair application of assignment criteria relating to the conservation of address space and aggregation of routing information
- To identify and improve any parts of the registration procedure that cause delays in order to improve service levels and response times
- To implement mechanisms to improve the quality, range and accessibility of the data the RIPE NCC provides relating to its allocation of Internet number resources to its members
- To provide high quality data on the allocation of Internet number resources that can reliably be used in the daily operations of ISPs

## 1.1.3 Policy Implementation (procedures)

**Description of Activity:**
The RIPE NCC implements procedures as part of the RIPE Policy Development Process (PDP).  New policy requests or requests for changes to be made to existing policies are discussed in the RIPE NCC Policy Implementation Coordination Group (PICG).

**Goal of Activity:**

- To provide transparency and consistency of the procedures
- To provide procedural information and responses to the RIPE community
- To support and promote global Internet IP address policies
- To document and maintain a clear overview of new and changed policies

## 1.1.4 Project Support

**Description of Activity:**
The RIPE NCC co-ordinates internal projects to support the range of activities related to the distribution of Internet resources.

**Goal of Activity:**

- To implement policy requests
- To provide cross-departmental dedicated project support

# 1.2 Training Courses

The RIPE NCC provides a range of courses to members and non-members, using a variety of teacher-based courses and additional training strategies.

The RIPE NCC makes continued efforts to reach a broader audience, particularly members who are unable to attend RIPE NCC training courses due to geographical, financial, scheduling or other constraints. These efforts include developing online modules that cover a range of RIPE NCC procedures and the RIPE Policy Development Process (PDP).

The RIPE NCC provides the following courses to its members for free:

- LIR Training Course
- DNS for LIRs Training Course
- Routing Registry Training Course

## 1.2.1 LIR Training Course

**Description of Activity:**
The Local Internet Registry (LIR) Training Course is a one-day introduction to the procedures and policies related to obtaining and distributing Internet number resources from the RIPE NCC, operating an LIR and using the RIPE Database. The training material is regularly updated to make sure that LIRs are aware of any recent policy changes decided by the RIPE community.

**Goal of Activity:**

- To help members send correctly prepared Internet number resource requests to the RIPE NCC
- To help ensure a more timely completion of these requests
- To explain the correct procedure for registering and updating registry data relating to Internet number resources
- To create awareness for the RIPE Policy Development Process

### 1.2.2 DNS for LIRs Training Course

**Description of Activity:**
This course provides an introduction to reverse DNS (rDNS) procedures and checks, as well as giving information about DNS Monitoring (DNSMON), K-root and anycasting. The course also covers DNSSEC and the specific procedures set up by the RIPE NCC to secure the in-addr.arpa zones.

**Goal of Activity:**

- To provide LIRs with information about the different DNS-related services offered by the RIPE NCC

### 1.2.3 Routing Registry Training Course

**Description of Activity:**
The Routing Registry Training Course covers Internet Routing Registry (IRR) usage, related tools and Routing Policy Specification Language (RPSL).

**Goal of Activity:**

- To provide an introduction to the Internet Routing Registry (IRR) usage, related tools, Routing Policy Specification Language (RPSL) and the RIPE NCC Routing Information Service (RIS)

# 1.3 Customer Services

The purpose of the RIPE NCC's Customer Services is to take ownership of first line enquiries and requests, managing each request correctly and efficiently while communicating all necessary details. In order to ensure the complete satisfaction of its members, the RIPE NCC focuses on the following Customer Services goals:

- Act as the general first line contact point for the RIPE NCC as a whole (questions, feedback, issues and problems)
- Bring new members up to speed so that they can request resources and make use of other RIPE NCC services
- Consolidate customer support services and facilitate the coordination of consistent internal and external service levels
- Answer general member and public enquiries, providing a good resolution in the shortest possible time and escalate when appropriate (following agreed Service Level Agreements)
- Provide the first interface between the RIPE NCC and potential and new members
- Handle all phone, mail and e-mail enquiries in a professional manner
- Create standard answers for frequently asked questions
- Document service quality measures and targets and provide reporting on this

### 1.3.1 New LIR Support

**Description of Activity:**
The RIPE NCC gives initial support to LIRs during their set-up phase. Information and support is also extended to potential LIRs.

**Goal of Activity:**

- To support new LIRs during their set-up phase by introducing them to the relevant tools, procedures and guidelines
- To give potential LIRs enough information to make an informed choice as to whether or not they become an LIR
- To prepare LIRs so that they are able to make use of the RIPE NCC's services

### 1.3.2 Billing and Administration Support

**Description of Activity:**
The RIPE NCC provides billing and administrative support for existing and potential LIRs.

**Goal of Activity:**

- To provide support for billing questions, invoicing (invoices, reminders) and the merger/closure of LIRs
- To provide support for contract-related issues such as LIR name changes and mergers

### 1.3.3 Database User Support

**Description of Activity:**
The RIPE NCC provides user support for the RIPE Database and related services. This includes incident handling and problem resolution as well as responding to user questions and comments.

**Goal of Activity:**

- To provide first line user support for the RIPE Database and related services
- To continuously collect user feedback regarding these services
- To report on Service Level Agreement (SLA) adherence
- To create standard answers for frequently asked questions

### 1.3.4 DNS and Reverse DNS (First Line Support)

**Description of Activity:**
The RIPE NCC provides DNS coordination and support activities as well as reverse DNS service for IPv4 and IPv6 address space managed by the RIPE NCC.

**Goal of Activity:**

- To provide first line user support for the DNS, Reverse DNS and related services
- To continuously collect user feedback regarding these services
- To report on SLA adherence
- To create standard answers for frequently asked questions

# 1.4 RIPE NCC Interaction Mechanisms

The RIPE NCC provides flexible and convenient ways for LIRs and others from the Internet community to interact with the RIPE NCC's systems. There is a specific focus on the security aspects of such interactions to ensure privacy and authentication wherever needed.

## 1.4.1 Customer Service Centre

**Description of Activity:**
At RIPE Meetings the RIPE NCC provides staff who are available for face-to-face consultation about:

- Internet resource requests (IPv4, IPv6, Autonomous System Numbers)
- The RIPE Database
- Changes to registry file information
- Invoice and billing queries
- RIPE NCC Training Courses and the RIPE NCC E-Learning Centre
- The Routing Information Service (RIS) and BGPlay
- Reverse DNS setup, DNSSEC, DNSMON, K-root, the Test Traffic Measurements (TTM) service, and e-mail services
- How to become a Local Internet Registry (LIR)
- The RIPE NCC and its services

**Goal of Activity:**

- To assist members and the RIPE community in any outstanding issues
- To promote greater cooperation between the RIPE NCC, its members and the RIPE community

## 1.4.2 RIPE NCC LIR Portal

**Description of Activity:**
The purpose of the LIR Portal is to give LIRs an easy-to-use web interface for accessing RIPE NCC services, for managing their registry's data and for making queries and updates. The LIR Portal is also used by the RIPE NCC to make important announcements to RIPE NCC members and for collection of valuable feedback through a range of member surveys.

**Goal of Activity:**

- To enable members to receive Internet number resources in a timely fashion by improving the request, evaluation and approval process
- To enable members to manage their registry data and make queries and updates

# 2. Coordination Activities

# 2.1 RIPE Database: Maintenance and Development

The RIPE Database contains registration details of IP addresses and AS Numbers used by networks based in the RIPE NCC service region.

It shows the organisations that hold the resources, where the allocations were made and contact details for the networks. The organisations that hold those resources are responsible for updating their information in the RIPE Database.

An Internet Routing Registry (IRR), primarily for the RIPE NCC region, is also part of the RIPE Database.

The information in the RIPE Database is used by a range of people, including network engineers, system administrators, researchers and End Users for various purposes such as network troubleshooting or determining abuse contacts. In most cases these users are not RIPE NCC members.

The RIPE NCC regularly makes improvements to the interface for the RIPE Database in order to provide users with more useful features and easier ways to update the database. The RIPE NCC also makes continued efforts to improve the accuracy and the usefulness of the data in the RIPE Database.

The RIPE NCC implements community-driven changes as they arise, making software and system modifications in response to feedback from users and decisions made by the RIPE community.

## 2.1.1 User support and software maintenance

**Description of Activity:**
The RIPE NCC provides user support for the database and related services. This includes incident handling and problem resolution as well as responding to user questions and comments.

The RIPE NCC also performs regular software maintenance activities including bug fixes and minor modifications. The results of these software development efforts are made publicly available.

This activity includes the maintenance and improvement of documentation associated with the RIPE Database.

**Goal of Activity:**

- To provide user support for the RIPE Database and related services
- To continuously collect user feedback regarding the service
- To keep the user community informed about new developments as well as planned and emergency maintenance
- To ensure the high quality of the system software and the reliable operation of the database and related services

### 2.1.2 Internet Registry Information Service (IRIS)

**Description of Activity:**
The IRIS operates using the protocol developed by the IETF Cross Registry Information Service Protocol (CRISP) Working Group. The RIPE NCC publishes the parts of the RIPE Database related to the address registry through the IRIS server. The RIPE NCC continues to work on server implementation and client tools in coordination with other RIRs and client tool authors.

**Goal of Activity:**

- To support the widespread adoption of IRIS
- To allow users to look up IP address ranges or AS Numbers using a tool based on industry standards
- To facilitate development of a RIR-wide system for global address registry lookups

### 2.1.3 New Database Features

**Description of Activity:**
The RIPE NCC designs and implements new database features as requested by the user community or proposed by the RIPE NCC. It performs the development work based on the priorities established in the appropriate RIPE Working Groups.

**Goal of Activity:**

- To provide new features to the RIPE Database as the user community expresses the need for them

## 2.2 RIPE

The RIPE NCC supports the RIPE community through technical and administrative coordination.

### 2.2.1 RIPE Meetings

**Description of Activity:**
The RIPE NCC organises RIPE Meetings, providing all administrative and technical support.

**Goal of Activity:**

- To support the open, bottom-up, industry self-regulatory structure common to all RIR communities in managing Internet number resources
- To stimulate the participation of the RIPE community and other stakeholders in the IP policy-making process and the technical coordination of IP networking
- To contribute to the stable operation of the RIPE NCC by allowing for guidance and advice from the RIPE Working Groups
- To enable attendees to provide input and feedback on the RIPE NCC Activity Plan

### 2.2.2 Supporting the RIPE Policy Development Process (PDP)

**Description of Activity:**
Anyone interested in the well-being of the Internet may propose a policy within the RIPE community forum and take part in the related discussions. The RIPE NCC supports the PDP by giving administrative support.

**Goal of Activity:**

- To make it easy to follow and to participate in policy development
- To ease the process of proposing policy change
- To make it easier to understand the text of policy documents
- To support the discussions by providing relevant facts, statistics and an assessment of the work involved in the implementation of a proposal
- To make the status and history of policy proposals clear

## 2.3 Mailing List Management

The RIPE NCC maintains a number of high volume external mailing lists. The processing of mailing list traffic is constantly monitored. Efforts are made to support subscribers with problems and to reduce or control the spam on external mailing lists so that they can be easily and efficiently moderated without losing any End User functionality.

The goal is to ensure the exchange of information among the RIPE community and the RIPE NCC membership, as well as to provide support for subscribers of the RIPE and RIPE NCC mailing lists.

# 2.4 Domain Name System (DNS) Coordination

The RIPE NCC provides DNS coordination and support activities as well as reverse DNS service for IPv4 and IPv6 address space managed by the RIPE NCC.

For reverse DNS associated with address space managed by other RIRs, the RIPE NCC provides secondary DNS to support the reliability of reverse lookups.

The scalability of the DNS infrastructure for secondary, reverse and primary DNS services is improved based on the requirements specific to each of these services. The purpose of these activities is to maintain and improve the operations of an efficient, responsive and robust DNS service.

## 2.4.1 Reverse DNS

**Description of Activity:**
The RIPE NCC delegates reverse DNS zones for the address ranges managed by the RIPE NCC. To support this service, the RIPE NCC provides a reliable authoritative name server and checks all zones under its responsibility to ensure they are properly set up and functioning correctly.

As part of its efforts in the area of DNSSEC deployment, the RIPE NCC publishes signed zones and provides tools for users to secure delegations received from the RIPE NCC. In addition, the RIPE NCC shares experience through publishing operational white papers, documentation and software toolkits.

**Goal of Activity:**

- To support the proper address-to-name mapping for addresses allocated to the RIPE NCC
- To provide reliable and secure reverse DNS services
- To support the operation and maintenance of DNSSEC

## 2.4.2 Operating the K-root Name Server

**Description of Activity:**
The RIPE NCC operates the K-root server. 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) in the United Kingdom.

Since 2003, the RIPE NCC has been deploying anycast instances of the K-root server with local reachability. The RIPE NCC has also deployed five global nodes of the K-root name server. The RIPE NCC collects and analyses data to determine the performance of the K-root anycast nodes that have been deployed.

**Goal of Activity:**

- To improve the resiliency, efficiency, security and quality of the K-root service
- To isolate the impact of an "external" Denial of Service (DoS) attack and localise the impact of a "local" DoS attack
- To efficiently maintain the network of anycast instances of K-root by monitoring network and instance problems, performing trend analysis and determining if, and where, other anycast nodes should be deployed

## 2.4.3 Secondary DNS Service

**Description of Activity:**
The RIPE NCC offers a secondary name service to the other Regional Internet Registries along with some country code Top-Level Domain (ccTLD) administrators, although it no longer provides this service to well-established ccTLDs.

**Goal of Activity:**

- To support the stability of the global DNS by offering a professional and stable service to the other Regional Internet Registries and developing ccTLD operators that require it

## 2.4.4 DNS Services in the e164.arpa Domain

**Description of Activity:**
The Internet Architecture Board (IAB) has an agreement with the RIPE NCC under which the RIPE NCC provides technical operation of the e164.arpa domain. This domain implements support in the DNS for the ENUM protocol, allowing mapping of telephone numbers to domain names in order to help facilitate such services as Voice over IP (VoIP).

**Goal of Activity:**

- To support operations of one of the systems required for the deployment of the ENUM protocol, promoting increased integration between the Internet and services provided through the traditional telephony infrastructure

# 2.5 Reporting on RIPE NCC and RIPE Activities and Developments

The RIPE NCC reports on its activities and RIPE developments using a variety of media:

- The RIPE NCC website
- The RIPE NCC Annual Report, including financial statements
- The RIPE NCC Member Update newsletter (distributed to the membership one month prior to each RIPE Meeting)
- E-mail reporting to RIPE NCC members and interested parties
- RIPE Meetings, RIPE NCC Regional Meetings and Roundtable Meetings

The goal of the RIPE NCC's reporting activities is to provide the membership and other interested parties with open, detailed information about the ongoing activities of the RIPE NCC and its role in Internet administration. It also furthers the RIPE NCC's efforts to communicate more effectively with its membership and stakeholders and to increase participation in RIPE.

## 2.5.1 Annual Report

**Description of Activity:**
The RIPE NCC Annual Report, including financial statements, is published in advance of the RIPE NCC General Meeting (GM).

**Goal of Activity:**

- To provide a full account of the RIPE NCC's activities in the previous year and audited financial statements for RIPE NCC members to vote on at the GM

## 2.5.2 Minutes and Reports from RIPE Meetings

**Description of Activity:**
The RIPE NCC provides minutes of RIPE Working Group and Plenary sessions at RIPE Meetings, including links to relevant presentations.

In addition, the RIPE NCC provides reports after each RIPE Meeting that summarise the highlights and actions that came out of the meeting.

**Goal of Activity:**

- To keep the RIPE community, the RIPE NCC membership and other interested parties up-to-date with the decisions and discussions that took place at the previous RIPE Meeting

### 2.5.3 RIPE NCC Member Update

**Description of Activity:**
The Member Update publication fulfils a request made by members in the 2002 RIPE NCC Membership Survey by providing information on the RIPE NCC and the development and performance of its services to the membership. It also provides updates on policy development issues affecting the RIPE community.

**Goal of Activity:**

- To publish and distribute the latest Member Update at least four weeks prior to each RIPE Meeting

# 2.6 RIPE NCC External Relations

The purpose of the RIPE NCC's external relations activities is to:

- Support and represent the interests of the RIPE NCC's membership and the RIPE community
- Communicate the RIPE NCC's role in IP address management and the technical coordination of the Internet
- Win continued support for RIPE's long-established, bottom-up, industry self-regulation and promote the open structures and processes in which RIPE and the RIPE NCC operate
- 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

## 2.6.1 Coordination with Governments and Regulators

**Description of Activity:**
Building on its position as a neutral and trusted organisation with proven expertise in the technical coordination of IP networking, the RIPE NCC continues to develop relations with government and regulator representatives. This is part of continued efforts to enhance the cooperation between the public and private sector regarding Internet management issues.

The RIPE NCC facilitates Roundtable Meetings to discuss Internet management issues relevant to governments and regulators. The Roundtable Meetings provide a chance for attendees to learn more about how to participate in IP address management policy-making. High-level discussions of topics such as IP address space management and root server operations also provide attendees with an overview of the main elements involved in the technical coordination of the Internet.

**Goal of Activity:**

- To develop close contact with governments and regulators with an interest in the technical coordination of IP networking
- To explain the proven, long-standing industry self-regulatory structures of the RIRs and secure continued support for the existing registry process
- To communicate the principles of Internet industry self-regulation to policy makers  in the public and the private sector, and to encourage well-informed decisions
- To encourage the participation of public and private sectors in the formation of policies related to Internet number resource distribution
- To bring together the public and private sector to discuss IP networking issues

## 2.6.2 Coordination with Industry Bodies

**Description of Activity:**
The RIPE NCC continues to support and represent the interests of its membership and the RIPE community to Internet industry groups. The main goals of these outreach activities remain the promotion of the open, bottom-up, industry self-regulatory structure common to all RIR communities in managing Internet number resources as well as the general technical coordination needed to support the stable operation of the Internet.

The RIPE NCC represents the interest of its members and the RIPE community by actively participating in various industry-related forums and meetings.

**Goal of Activity:**

- To increase the awareness of RIPE and the RIPE NCC with existing and new players in the Internet community
- To ensure that the RIPE NCC continues to play an effective role in the further formalisation of Internet administration

## 2.6.3 RIPE NCC E-Learning Centre

The RIPE NCC provides a range of courses to members and non-members, using a variety of teacher-based courses and additional training strategies.

The RIPE NCC provides an E-Learning Centre, a free resource allowing members and non-members to access online modules on a variety of topics. Topics covered include Internet Administration, the RIPE Policy Development Process, the RIPE Database, PGP/X.509 and IPv6 for LIRs.

### 2.6.4 Liaison and Outreach

### 2.6.4.1 Increasing Participation in the Policy Development Process

**Description of Activity:**
The RIPE NCC aims to increase the participation of RIPE NCC members and the RIPE community in the Policy Development Process (PDP) and the discussion that occurs on the RIPE NCC mailing lists. In broad terms, this activity will ensure the sustainability of the PDP by educating new participants of the community about how the process works and its role in supporting the open, bottom-up, industry self regulatory structure common to all RIR communities. Outreach activities will seek to widen the demographic make-up of current participants by targeting CEOs and the senior management of ISPs as well as the younger members of the RIPE community.

**Goal of Activity:**

- To ensure the sustainability of the RIPE Policy Development Process
- To explain the importance of the Policy Development Officer in facilitating the RIPE Policy Development Process
- To increase the diversity of voices participating in the RIPE Policy Development Process

### 2.6.4.2 Regional Support

**Description of Activity:**
The RIPE NCC organises Regional Meetings that provide a focused effort to proactively encourage feedback from RIPE NCC members and the RIPE community. In addition, these meetings are intended to increase the involvement of RIPE NCC members, the RIPE community and other stakeholders in the open policy-making process.

**Goal of Activity:**

- To promote local contact with members
- To provide a forum for discussing issues relevant to a specific area of the RIPE NCC service region
- To enable the RIPE NCC to continuously evaluate and address the changing needs of RIPE NCC members

## 2.7 Information Dissemination

**Description of Activity:**
The RIPE NCC ensures timely and effective information dissemination of relevant publications, announcements and web postings (via the RIPE NCC web site) to the RIPE NCC membership, RIPE community, governments and other stakeholders.

**Goal of Activity:**

- To build awareness of the RIPE NCC and its services
- To inform selected audiences about RIPE and RIPE NCC-related issues, news and noteworthy events
- To support the efforts of the organisation in its representation of the RIPE NCC membership, RIPE community and their interests to new industry players and governments

# 2.8 RIR Coordination

The RIPE NCC participates in coordination activities with the other RIRs. These coordination activities include:

- High-quality, consistent services
- The consistent application of approved policy
- Joint technical and communication projects
- Liaison activities
- The presentation of a global view of IP address management

The RIRs work together through the Number Resource Organization (NRO) to act collectively on matters relating to the interests of the RIRs. The NRO offers a single contact point that enables global partners to reach the RIRs collectively. This means that a global, uniform view supported by all five RIRs can be presented when necessary.

# 3. Information Services

The RIPE NCC provides a range of data and analysis on Internet infrastructure, measurement and usage. The RIPE NCC continues to integrate new and existing services into its service portfolio while developing overviews that explain how these services can be used and the benefits they offer.

# 3.1 Routing Information Service (RIS)

The Routing Information Service (RIS) provides an integrated view of Border Gateway Protocol (BGP) routing information collected at multiple locations worldwide. The service integrates multiple views, provides information about the routing state at specific times in the past and enables users of the service to monitor their Internet address space.

The data collected by the RIS is time-stamped, stored in a database and is used as the raw data for a number of additional services provided by the RIPE NCC, such as BGPlay and MyASN. The RIPE NCC investigates and develops additional services based on analysis of this data and feedback from the Internet community.

The goals of the RIS are to:

- Collect BGP information at multiple locations worldwide and make this data available to the community
- Provide tools to access the data and further enhance these tools based on community feedback
- Investigate the behaviour of the routing system and report to the community

# 3.2 Active Measurement Services (AMS)

The RIPE NCC's active measurement services are based around the TTM network, which also supports DNSMON. The data collected is made available to the community for both operational and statistical analysis, and the network itself is designed to be scalable so that other services can be developed with and around it. The strategy behind active measurement services is defined and evaluated in consultation with the RIPE Test Traffic (TT) Working Group so that it can be reviewed and adjusted to meet current and future user needs.

## 3.2.1 Test Traffic Measurements (TTM)

**Description of Activity:**
The Test Traffic Measurements (TTM) Service provides impartial measurements of the 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 IETF IP Performance Working Group (IPPM WG).

**Goal of Activity:**

- To collect independent measurements of performance-related quantities of the Internet, particularly between the networks operated by users of the TTM service
- To provide useful trend analysis and to refine the system based on user feedback

## 3.2.2 DNS Monitoring (DNSMON)

**Description of Activity:**
The RIPE NCC DNS Monitoring Service (DNSMON) provides a comprehensive, objective and up-to-date overview of the quality of the service offered by certain DNS root and Top-Level Domain (TLD) name servers.  DNSMON measures DNS performance between sites that take part in the TTM service and those where DNS servers are installed. The high number of probes and the method of presenting the results are unique. The information is updated every hour.

The measurements are presented at various levels of granularity, allowing users to switch between general representations and more detailed views specific to particular domains, servers, and probes for freely selectable time frames.

The RIPE NCC provides DNS Monitoring as a free service to the Internet community. For interested parties, TLD operators in particular, value added services such as monitoring of specific name servers and access to the DNSMON helpdesk are provided on a cost recovery basis.

**Goal of Activity:**

- To provide high-quality monitoring of important DNS servers
- To allow users to view historical data, enabling a quick analysis of both past and present DNS issues

### 3.2.3 Additional Active Measurements

**Description of Activity:**
In consultation with the RIPE Test Traffic Working Group, the RIPE NCC investigates and discusses development plans for using the Active Measurements Network to make additional active measurements.

**Goal of Activity:**

- To respond to requests from the Internet community to investigate the possibilities for making additional active measurements
- To monitor the latest research and technical developments related to the Active Measurements Network and the measurements that can be made using this network

## 3.3 Reporting and Statistics Collection

The RIPE NCC provides authoritative data and reports on the development of the Internet and the consumption rate of Internet number resources. As part of this activity, the RIPE NCC also raises awareness of issues related to the consumption of Internet number resources. The purpose of this activity is to provide useful, up-to-date information relevant to a range of interested parties, including:

- Network operators
- RIPE Working Groups
- Industry bodies
- Governments and regulators
- The media

A range of statistics are gathered and incorporated in order to improve cross-checks and cross-referencing as well as to unify the presentation of statistics and to improve their accessibility.

The RIPE NCC also develops metrics that can be used to objectively measure the quality of Internet number resource registration data and the results of efforts to improve data accuracy.

### 3.3.1 Hostcount

**Description of Activity:**
The RIPE NCC region Hostcount has been performed monthly since 1992 to indicate the growth in the RIPE NCC service region.

The Hostcount provides statistics on the number of hosts connected to the Internet in Europe and surrounding areas. The statistics are gathered in collaboration with a range of organisations doing local counts per country Top-Level Domain.

**Goal of Activity:**

- To provide the Internet community with an up-to-date view of the number of hosts connected to the Internet in the RIPE NCC service region
- To increase the accuracy and usability of the Hostcount, and to develop the Hostcount in consultation with the Internet community