version 1.6

RIPE Network Coordination Center (RIPE NCC)

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1 Introduction

Experience in the RIPE community, and in the Internet community at large, has shown that certain information and coordination services are needed for the proper functioning of the Internet.

This document proposes a way to provide these services to the RIPE community considering its special environment.

2 Purpose

This document proposes to create a Network Coordination Center that supports and coordinates the management of a pan European IP network. The proposal also contributes a building block to the global administrative framework of the Internet which is currently being developed (c.f. RFC1174).

The current RIPE structure is very well suited for development type of work. It is less well suited for the day to day work that is of a more administrative nature. These tasks should be handled by a dedicated technical staff that form the RIPE Network Coordination Center (NCC).

In accordance with the RIPE Terms of Reference, the main objective of the RIPE NCC is to give support to the networking organisations that cooperate in RIPE.

The RIPE NCC does not provide end user support services. Also network operation functions will not be provided by the RIPE NCC as these functions are performed by the network operation staffs of the RIPE member organisations. The RIPE NCC will however provide the necessary support and coordination to enable the RIPE member NOC staffs to provide these services.

The Network Coordination Center is 'embedded' in RIPE:

- RIPE defines the tasks and functions of the NCC
- the NCC reports to RIPE
- RIPE organisations participate in the work of the NCC
- RIPE regularly reviews the operations of the NCC

3 Organisational Structure

- RIPE defines the tasks to be executed by the NCC
- these tasks can be classified as follows:
  - centralised
  - distributed
- centralised tasks will be executed by the NCC
- distributed tasks can be executed by participating RIPE organisations, coordinated by the NCC
- the work of the RIPE NCC will be periodically evaluated by RIPE

4 Tasks

There are three distinct classes of tasks or functions foreseen for the NCC:

1. registry function
2. network information management
3. general RIPE support function

4.1 Registry Function

The RIPE NCC will function as a 'Delegated Registry' for IP numbers in Europe, as anticipated and defined in RFC 1174.

The NCC keeps the register of IP numbers and AS numbers for the RIPE member organisations. This will mean that the NCC allocates blocks of numbers to local registries in Europe. The local registries inherit the responsibility to supply the accompanying information. It remains the responsibility of the NCC to collect this locally gathered information, and make it globally available. The local registries are set up by RIPE member organisations as appropriate. Particular requests that can not be catered for by local registries will be handled by the NCC.

The NCC has to coordinate closely and meet periodically with the Internet registry.

4.2 Network Information Management

The NCC keeps a database of information describing at least the following objects:

- IP network numbers
- AS numbers
- DNS domains
- Persons
  Only those associated with an object of the previous classes. A general white pages service is not foreseen.

The NCC is responsible for four types of information exchange:

- collect RIPE information from local registries
- collect global information from organisations outside the RIPE domain
- provide global and RIPE information to local registries
- provide RIPE information to organisations outside the RIPE domain

Organisations outside the RIPE domain specifically include the Internet Registry and other outside NIC's and NOC's.

The RIPE NCC will be the only source of authoritative information from the RIPE world. The NCC will provide tools to RIPE member organisations to interrogate the network information databases. The network information databases kept by the NCC will also be available for the RARE community at large and other interested parties. OSI based tools for general access to the databases should be supported.

Privacy aspects of keeping personal information in publicly accessible databases will be carefully studied by the NCC in the context of the prevailing European laws. As a minimum safeguard against unsolicited violations of privacy, individual permission for keeping personal data in the database will be a requirement.

4.3 General RIPE Support Function

The following tasks have been defined as valuable support functions for the operation centers of the networks cooperating within RIPE:

- global network status information gathering
- global network performance monitoring
- support for the installation and distribution of the DNS in Europe
- collection, documenting and distribution of operation support tools
- management of the RIPE information server

These tasks must be performed in close cooperation with the RIPE membership.

5 Requirements for an NCC

The following requirements for the running of the RIPE NCC have been identified:

- staff
  - 1.0 FTE NCC manager with proven skills in:
    - Internet network technology, applied to large scale networks
    - Management
    - Working in an international environment
  - 1.0 FTE NCC technical staff with proven skills in:
    - Internet network technology, applied to large scale networks
    - Working in an international environment
  - 1.5 FTE Administrative staff, with proven skills in:
    - Administrative work
    - Using advanced computing equipment
    - Working in an international environment

- equipment:
  - work-stations with X-windows capability for staff
  - an adequate minicomputer to support the work-stations and to house the databases
  - excellent IP networking access
  - excellent mail connectivity
  - support for OSI based services
- office space and running costs:
  - 2 offices with the normal operational overheads
  - communication costs allocation
- travel budget
  it is foreseen that NCC staff will have to make at least the following travels on a yearly basis:
  - attend all RIPE meetings
  - attend 6 meetings in Europe
  - attend 4 meetings outside Europe