About RIPE

RIPE (Réseaux IP Européens) is a collaborative organisation open to all European Internet service providers. The objective of RIPE is to ensure the necessary administrative and technical coordination to allow the operation of a pan-European IP network. RIPE does *not* operate a network of its own.

RIPE has been functioning since 1989. Currently more than 60 organisations participate in the work. The result of the RIPE coordination effort is that the individual end-user is presented on his desktop with a uniform IP service irrespective of the particular network his or her workstation is attached to. In March 1994 more than 600,000 hosts throughout Europe are reachable via networks coordinated by RIPE. The total number of systems reachable worldwide is estimated at more than two million.

About the RIPE NCC

The RIPE *Network Coordination Centre* supports all those RIPE activities which cannot be effectively performed by volunteers from the participating organisations. Besides supporting RIPE activities in general the NCC provides the following services to network operators:

- **network management database**
  containing information about IP networks, DNS domains, IP routing policies and contact information
- **delegated Internet registry**,
  a clearing house distributing IP numbers
- **domain name system (DNS) coordination**
- **repository for network operations software**
- **RIPE document store**
- **Interactive Information Service**

The RIPE NCC is located in Amsterdam. The RARE association provides the formal framework for the NCC. Funding for the operation of the NCC is provided by all European Internet service providers.

To learn more about the RIPE NCC and its services you can consult the appropriate leaflet, the interactive information server or contact the NCC by electronic mail, telephone or fax.

RIPE NCC Contact Information

Address:	RIPE NCC Kruislaan 409 NL-1098 SJ Amsterdam The Netherlands
Phone:	+31 20 592 5065
Fax:	+31 20 592 5090
Electronic Mail:	`ncc@ripe.net`

RIPE NCC Interactive Information Service

Information about RIPE and RIPE NCC services can also be obtained using the Interactive Information Service. This menu-driven service allows browsing through the RIPE document store, reading documents and sending them by electronic mail. It can be reached by telnetting to host `info.ripe.net`. The service is available via the public X.25 networks at 0204129004331.

Access to the RIPE Document Store

All RIPE documents and Internet RFCs are available via anonymous FTP from host `ftp.ripe.net`. The same documents are also available via a "gopher" server at `gopher.ripe.net`, a "WAIS" server at `wais.ripe.net` and via a "World Wide Web" (WWW) server at `http://www.ripe.net/ripe/default.html`.

Access to the RIPE Database

The RIPE network management database can be accessed via the whois (RFC 954) server running on host `whois.ripe.net`. The database can also be accessed via the RIPE NCC interactive information service, described above.

Mailserver

Documents can also be retrieved from the RIPE document store using a mailserver program. For more information on how to use the program, send email to `mail-server@ripe.net` with `"send HELP"` in the body text.

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RIPE ncc

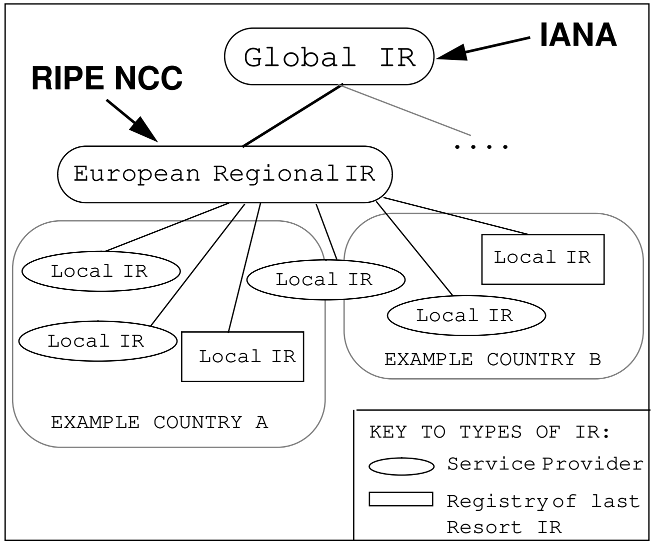
Delegated Internet Registry

in Europe

RARE

Delegated Internet Registry in Europe

The previously centralised procedures for obtaining IP network numbers from the Global Internet Registry have been replaced by a distributed allocation scheme. Blocks of Internet Network numbers are now delegated by the Internet Assigned Numbers Authority (IANA) to Regional IR's (RIPE NCC for Europe, the AP-NIC for the Asia Pacific region and the InterNIC for the rest of the world). In Europe, the RIPE NCC delegate blocks of numbers to Local Internet Registries who, in turn, make the majority of IP network number assignments across Europe. The diagram below shows this new distributed hierarchy.



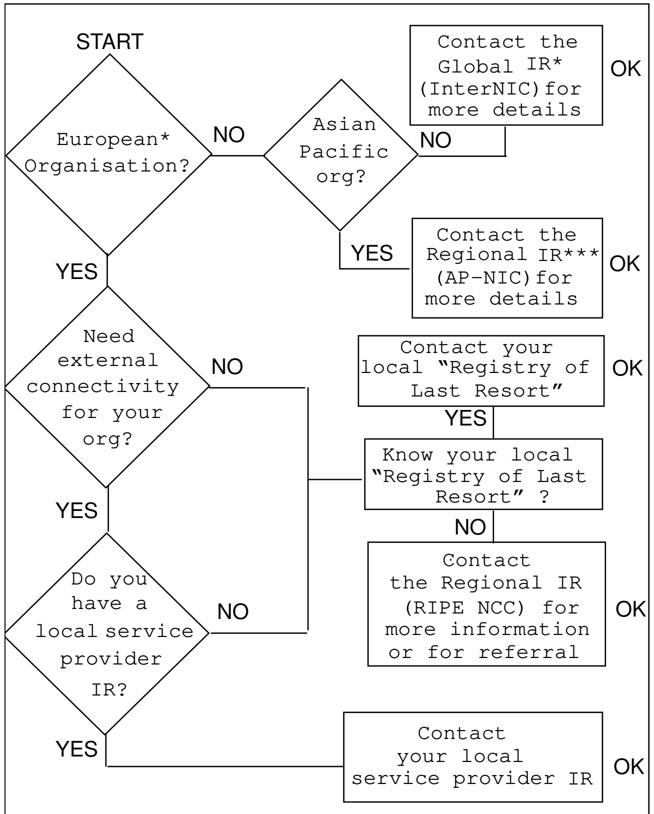
Local IR's are of two types. There are "Provider" registries and "Last Resort" registries. The difference between the two types of local IR is explained below.

An Internet service provider is an organisation that supplies Internet connectivity. Many service providers act as local IR's (the "Service Provider" registries). Under the CIDR scheme it is beneficial for everyone to get their IP numbers allocated via their respective service providers. Thus if you are planning to connect your network to other networks outside your organisation in the foreseeable future we strongly urge you to contact your service provider to see if they can allocate you IP numbers.

Alternatively if you are not planning to connect to the Internet or you have not selected a service provider, then you will be allocated your number from a different part of the address space by a "Registry of Last Resort" local IR in your country or by the RIPE NCC if one does not exist for your country. Whilst there are many " Provider" local IR's, there is currently only one "Registry of Last Resort" local IR per European country.

Where to apply for an IP number

You can refer to the chart below which explains where you should apply for your IP network number.



If you are in any doubt about where to apply for your number, do not hesitate to contact the RIPE NCC.

*European in this context refers to the former USSR, Eastern Europe and Mediterranean countries as well as what we traditionally understand to constitute "Europe".

** InterNIC Registration Service can be contacted on: tel +1-703-742-4777; fax +1-703-742-4811; e-mail <hostmaster@rs.internic.net>. Postal Address: Network Solutions Inc., Attention: InterNIC Registration Service, 505 Huntmar Park Drive, Herndon, VA 22070, USA.

*** AP-NIC is a pilot Regional IR for the Asian Pacific region. Their contact details are: tel +81-3-5684-7747; fax +81-3-5684-7256; and by email at <hostmaster@apnic.net>. Postal address is: AP-NIC, c/- University of Tokyo, Computer Centre, 2-11-16 Yayoi, Bunkyo-ku, Tokyo 113 Japan.

Class A, Class B number scarcity & more...

A classless IP addressing scheme called CIDR (Classless Inter-Domain Routing) has been adopted to cope with routing table growth and address space exhaustion problems in the Internet. It is also referred to as "Supernetting".

Class A numbers are extremely scarce and therefore very rarely assigned. They will only be allocated to organisations which technically need more than 65000 hosts to be on one physical network. A detailed technical justification is needed, review takes place on a global scale and the allocation process can take several months.

Similarly due to class B scarcity, a reasonable number of class C numbers will be assigned over a class B. If you can engineer your network to use multiple class C numbers, it is strongly advised. It is important to note that this is contrary to earlier recommendations where it was recommended to use B's over multiple C's due to routing table constraints.

If your organisation will NEVER connect to the Internet and has a large number of hosts, it is advised that you consider using private address space. Ask your local IR or the RIPE NCC for more details. The references below give details of recommended further reading.

Procedures & the application forms in Europe

The procedures for applying for IP network numbers have been standardised and simplified. Once you have contacted an IR for more information, you will be sent a "European IP Network Number Application Form". This form is used by registries across Europe.It is accompanied by "Supporting Notes" which explain how to complete the form. The documentation also gives hints for organisations applying for class B network numbers.

Once you have completed the application form you should send it to the appropriate IR. The procedure is the same for B's as it is for C's. However, in Europe, class B network numbers are currently only allocated by the RIPE NCC. Therefore if a Class B request is felt justified by a local IR, it will be forwarded to the RIPE NCC for further review.

Further Reading

- RFC1519 - "Supernetting: An Address Assignment and Aggregation Strategy"
- RFC1466 - "Guidelines for Management of IP Address Space"
- RFC1597 - "Address Allocation for Private Internets"

All the documents can be accessed via the RIPE Interactive Information Server. Please see overleaf for access details.