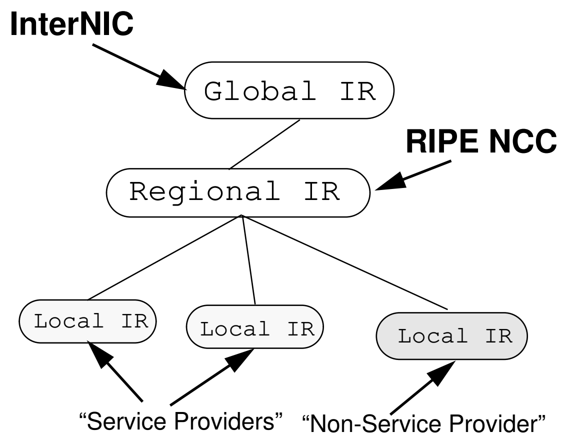
Delegated Internet Registry

The previously centralised procedures for obtaining IP network numbers from the Global Internet Registry (known as the InterNIC, previously the DDN NIC) have been replaced by a distributed allocation scheme. Blocks of Internet Network numbers are now delegated by the Global Internet Registry to the RIPE NCC, who in turn delegates blocks of numbers to Local Internet Registries (IR's). The local IR's in turn, make the majority of IP network number assignments across Europe. The diagram below shows this new distributed hierarchy.



At the present time, this change of procedure is not yet common knowledge. This leaflet is intended to disseminate the information about the new procedures and help us realise our aim of providing a rapid and efficient service to all European organisations.

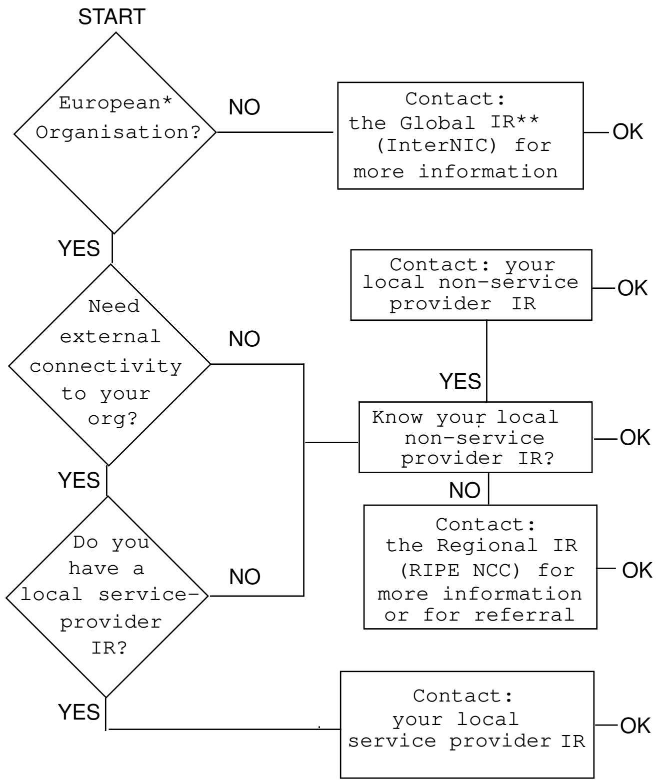
Where to apply for an IP number

Local IR's are of two types. There are "non-service provider" registries and "service provider" registries. The difference between the two types of local IR is explained below.

An IP service provider is an organisation that supplies Internet connectivity. Many IP service providers act as local IR's. Under the CIDR scheme it is beneficial for everyone to get their IP numbers allocated via their respective IP 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 IP 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 an IP service provider, then you will be allocated your number from a different part of the address space by a "non-service provider" local IR in your country or by the RIPE NCC if one does not exist for your country. Whilst there are many "service provider" local IR's, there is currently only one "non-service provider" local IR per European country.

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, please 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 at the following: telephone +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.

Class A and Class B number scarcity....

A new classless IP addressing scheme called CIDR (Classless Inter-Domain Routing) has recently been adopted to cope with routing table growth and address space exhaustion problems in the Internet. It is also referred to as "Supernetting", which is a term frequently used in association with IP address scarcity. (See the references below for details of recommended reading).

Class A numbers are extremely scarce and therefore very rarely assigned. They will only be allocated to networks 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.

Procedures & the European template

The procedures for applying for IP network numbers have recently 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. The form is accompanied by "Supporting Notes" which explain how to fill in the template. 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

- rfc 1338.txt - Supernetting: An Address Assignment and Aggregation Strategy
- rfc 1466.txt - Guidelines for Management of IP Address Space
- ripe-draft-hints-v1.txt - A guidelines draft document on requesting large blocks of IP addresses

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

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 May 1993 more than 385,000 hosts are reachable via networks connected by RIPE networks. The total number of systems reachable worldwide is estimated at more than 1.6 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 network numbers
- **coordinated network statistics gathering**
- **domain name system (DNS) coordination**
- **graphical maps of IP networks**
- **repository for network operations software**
- **RIPE document store**
- **interactive information service**

The RIPE NCC currently has 3 permanent staff members. The RARE association provides the legal and financial framework for the NCC. Funding for the first year of operation of the NCC has been provided by the national members of RARE, EARN, EUnet and Israel.

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 also 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` and a “WAIS” server at `wais.ripe.net`.

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 message body.

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RIPE ncc

Delegated Internet Registry

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