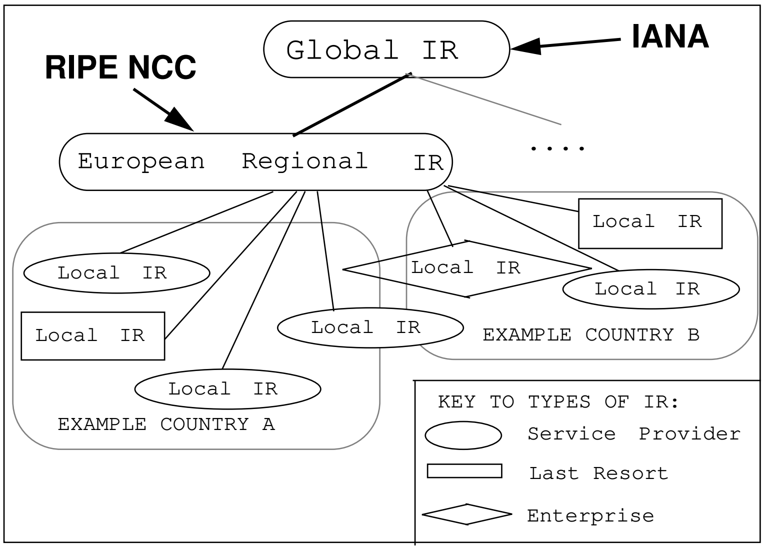
EUROPEAN IP NETWORK NUMBER

APPLICATION FORM & SUPPORTING NOTES

To whom it may concern,

Thank you for your request for an IP network number. Please ensure that you read the information below carefully before submitting your application for an IP number. The form appended to this letter will be accepted by local Internet Registries across Europe.

Since 1992, the procedures for obtaining IP network numbers from one central organisation in the US have been replaced by a distributed system whereby applications for IP network numbers across Europe are processed by local Internet Registries (local IR's). The Global Internet Registry (Global IR) now delegates blocks of IP network numbers to the RIPE NCC, the registry for the European region, which in turn delegates blocks of IP network numbers to local IR's. The diagram below shows the distributed hierarchy of Internet Registries. Note that local IR's are of three types: "Service Provider", "Enterprise" and "Last Resort" . An IP service provider (ISP) is an organisation that supplies Internet connectivity to it's customers or users. "Last Resort" local IR's handle all requests from organisations that have no connection to the Internet at present or planned. "Last Resort" IR's are often run by ISP's as a voluntary and neutral service to the community. As such, please contact them ONLY in the event of the "Last Resort" as their name implies. An "Enterprise" local IR is one which centrally coordinates address space usage for a large enterprise.



In the interest of using the Internet resources as efficiently as possible, please apply for address space at your local ISP if you have future plans to connect to the Internet. If you are NOT a customer of a service provider, then you should send your completed application form to the "Last Resort" local IR. Currently only one of this type of registry exists per country in Europe. If you do not know whether this type of local IR exists for your country, then you should contact the RIPE NCC (address is given below). Please note that non-European requests are handled by the Asian-Pacific regional IR for that region, and the InterNIC as default for the rest of the world (contact details are given for these organisations on page 13 under Section F).

Regardless of whether you are applying for class B or C addresses you should always make your application in the first instance to a local IR. However, class B addresses are only assigned by a Regional Internet Registry (in Europe this is the RIPE NCC located in the Netherlands), so if your application is felt justified, it will be forwarded by your local IR for the RIPE NCC to review.

If you have any queries, please do not hesitate to contact the RIPE NCC who will be able to advise you. Our contact details are given below. Queries by email are preferred:

RIPE Network Coordination Centre
Kruislaan 409
1098 SJ Amsterdam
The Netherlands

email: hostmaster@ripe.net
tel.: +31 20 592 5065
fax: +31 20 592 5090

Supporting Notes for the IP Request Form

Before making your request for an IP number, there are 2 documents which you should receive and read:

- o the Supporting Notes - this document
- o the European IP number request form - appended to this document

This document will guide you in how to complete the European IP number request form correctly. This form is used by all the Internet Registries across Europe. The format of the form is designed so that it enables your application to be processed more quickly. That is why we ask you to carefully read and follow the “Supporting Notes” document. Please be careful to follow the information contained within the examples below. A completed template is also included for reference. If you are unsure about any of the fields, please leave them blank. Please send the completed template to your local IR or contact the RIPE NCC if you are unsure about what to do next. Please note that statements made in this form can be used in consideration of future applications that are made.

Part A - Administrative Details

The information supplied for this section together with the assigned network numbers will be entered into a database of European network numbers and their contact information which is accessible by the whole Internet community.

NETWORK TEMPLATE

netname:

Please complete with an appropriate network name for the network to be numbered which is short and meaningful. The ‘netname’ is used mainly for administrative purposes like consistency checking of the Internet Registry. You will most likely not see this name appear anywhere, but on forms like this. The network name should be written in capital letters e.g:
netname: TBIT

descr:

Please complete with a short description of the organisation, including the location. The full postal address is not needed as this is required in the person template e.g:
descr: Terabit Labs Inc.
descr: Network Bugs Feeding Facility
descr: Northtown

country:

Please give the two letter country code (ISO 3166) which is appropriate for the organisation. We know this gives problems for networks crossing national boundaries, so choose the most appropriate country, based on the location of the admin contact. If you do not know the appropriate code for your country, please complete with the full name of the country e.g:
country: NL or country: Republic of Northern Nowhere

admin-c:

Please complete with the name or NIC handle of the person who is the administrative contact for the network. The NIC handle (if known) is preferred. **This person must be someone who is physically located at the site of the network.** Please do not use formal titles like ‘Dr’ or ‘Prof.’ or ‘Sir’. Please specify as in the example below (or with the NIC handle). Do not add full stops between the names or initials stating first name, last name e.g:
admin-c: John E Doe or with a NIC handle e.g. admin-c: JD0401

tech-c:

Please give the name of technical contact person (or NIC handle as mentioned above). There can be more than one name specified for the technical contact. NOTE: please give names for both the administrative AND the technical contact. If two different names are not appropriate, then the same name for both contacts is fine.
tech-c: Mark A Smith or with a NIC handle e.g. tech-c: MS0403

changed:

Email address of the person who is completing the template, followed by the current date. If you do not have email connectivity please leave blank and we will complete it. Please add the date in the format shown below e.g:
changed: johndoe@terabit.nn 930225

source:

Source of the information. It will always be RIPE. This is information which is always required in the database, so it has been added already.

PERSON TEMPLATE

For each different person specified in the network template, please complete a separate person template, unless the data about those persons is already in the RIPE database.This template should be completed, one for each person mentioned in the “Network” template. This example is for the admin contact: John Doe.

person:

Please give the full name of the persons specified in the admin-c contact and the tech-c contact fields. The names must be written identically to those given in the “admin-c:” and “tech-c:” attributes (but must not be the NIC handle or official titles like ‘Dr, Prof. or Sir. Do not add full stops between the names or initials stating first name, last name e.g:’
person: John E Doe

address:

Please complete with the full postal address, and write as you would for ordinary postal mail using one line for each part of the address as shown below e.g:
address: Terabit Labs Inc.
address: Industrial Estate North
address: North Perpendicular Road 12
address: NL-1234 Northtown
address: The Netherlands

phone:

Please give the work telephone number of the person specified above. Please specify the telephone number with + <country code> <area code> <telephone number>. Most countries should drop the leading zero when specifying their area code. More than one telephone number is fine. Each telephone number should be put on a separate line and written in order of the most appropriate number for the contact person e.g:
phone: +31 20 1233 4676
phone: +31 20 1233 4677 ext. 4711

fax-no:

Please complete with the telefax number of the person specified above. Follow the same rules as specified for telephone number above e.g:
fax-no: +31 20 12334678

e-mail:

Please supply the appropriate electronic mail address for the admin-c (the administrative contact person)/ and the tech-c (the technical contact person). Please ensure that this is a valid domain address. If you DO NOT have e-mail connectivity, please leave this blank as the email attribute will not be included in the administrative details stored in the database for this person, e.g:
e-mail: johndoe@terabit.nl

nic-hdl:

This refers to a NIC handle which is a unique identifier assigned and used by the US NIC to unambiguously refer to Internet people. If you do not have a NIC handle, then please leave blank e.g:
nic-hdl: JD0401

changed:

By whom and when this was last changed. Please complete with your e-mail address followed by the current date in the format which is shown below. If you do not have e-mail connectivity, please leave blank and we will complete this on your behalf e.g:
changed: johndoe@terabit.nl 930225

source:

Source of the information. It will always be RIPE. This is information which is always required in the database, so it has been added already.

Part B - Technical Details

Information supplied below helps us to evaluate and process your request. It will be kept in CONFIDENCE and is for internal use only. It will NOT be entered into the RIPE Network Management Database.

TECHNICAL TEMPLATE

request-type:

Please specify the quantity and class of your request for network numbers. We would strongly advise that you consider subnetting class C addresses when multiple segments will be used to support a minimal amount of host addresses. Multiple class C numbers should be used when it is necessary to support more than 256 hosts on a single network. Please be guided by the following EXAMPLES of number of hosts which relate to the quantity of network numbers requested e.g:

1 class C number (maximum 254 hosts)
2 class C numbers (maximum 508 hosts)
4 class C numbers (maximum 1016 hosts)
8 class C numbers (maximum 2032 hosts)
16 class C numbers (maximum 4064 hosts)
*32 class C numbers (maximum 8128 hosts)**
*single class B number**
*other (please specify)**

**A second opinion will be sought from the RIPE NCC for requests for larger amounts of address space*

machine-0: (and the same for machine-1:, machine-2:)

Please state the total number of machines in your organisation that currently require a unique IP address: machine-1 & machine-2 refer to the expected number of machines in one and two years time. Do not forget to include terminal servers and network numbers needed for transit networks when calculating this figure e.g:
machine-0: 100

subnet-0: (and the same for subnet-1;subnet-2)

Please state the number of subnets required for the current network: subnet-1 & subnet-2 refer to the number of subnets in one and two years time. A subnet refers to the physical parts of the network which need a unique (sub)net number e.g:
subnet-0: 10

inet-connect:

Please state whether you plan to connect to the Internet with IP (and not UUCP or any other store and forward gateway mechanism). Please answer with whichever of the following options most closely describes the position of your organisation e.g:
-will never connect
-already connected <through whom>
-plan to connect <date> <through whom>
If you are “already connected” to the Internet, please state which service provider you are connected to. If you answer with “plan to connect” then please make an estimation on the date that you hope to connect, specifying (if possible) the month, the year and through whom e.g:
-inet-connect: plan to connect 930401 Net-Provider Inc

Please note: If you are not planning to connect to the Internet in the near future, please consider the recommendations in rfc1597 "Address Allocation for Private Internets" (page 8) and explain why this is not suitable for your needs.

country-net:

Please give the ISO 3166 country code which describes where the network will be located. If more than one country applies, then give the iso codes of the countries which will be covered by the network. Format: complete with country name(s) using ISO 3166 country code. If you are unsure, write the name of the country out in full e.g:
country-net: NL SE or country-net: Republic of Northern Nowhere

Part C - Network Details

Please complete this section on a separate page if you are applying for more than 2 Class C network numbers or if you already hold some address space and are now applying for more address space. The more numbers you are requesting, the more detailed your technical description will need to be. Please note that local registries are required to seek a second opinion from the RIPE NCC on applications for 32 class C numbers or more. Thus if your application is for this number (or more), it is necessary that you write this section in English. Please include details of your network deployment plans, describing the network now and in one and two years. Do not forget transit networks, terminal servers etc. when calculating your needs. In addition, please complete the table in this section which asks for details of your addressing plan. Specifically you will need to state per subnet, the number of hosts now and those planned for one and two years time , subnet mask and the maximum number of hosts possible for that subnet. Please add any explanatory remarks you feel necessary.

Before you complete this section you should read the 'Additional Hints' which will guide you. It is particularly important to read this section, especially if you are applying for a class B network number, if you are requesting additional class C addresses or consider that you might need to in the future, or if part of your network is not intending to connect to the Internet, as it provides more detail and a number of helpful hints (see page 8).

If you are applying for a Class B network number please send your completed application to your local registry who will review your case. If it is felt that a Class B network number is justified, your application will be forwarded to the RIPE NCC for review.

Part C - Addressing Plan

You should describe your addressing plan by completing the table like in the example below using arbitrary network numbers.

Subnet #	Subnet Mask	Max	Now	1 Year	2 Year	Location
1.0	255.255.255.224	30	8	16	24	Network Group (use 0!)
1.1	255.255.255.224	30	17	22	26	Engineering
1.2	255.255.255.224	30	12	12	12	Manufacturing
1.3	255.255.255.224	30	5	9	11	Management
1.4	255.255.255.224	30	10	15	20	Sales
1.5	255.255.255.224	30	7	8	9	Finance
1.6	255.255.255.224	30	0	0	0	(spare)
1.7	255.255.255.224	30	0	0	0	not used
2.0	255.255.255.240	14	0	0	0	not used
2.	255.255.255.240	14	2	3	4	Office at Amsterdam
2.2	255.255.255.240	14	1	2	3	Office at Rotterdam
2.3	255.255.255.240	14	2	3	3	Office at Brussels
2.4	255.255.255.240	14	4	5		Office at Paris
2.5	255.255.255.240	14	0	1	1	Office at Moscow
2.6-2.12	255.255.255.240	98	0	0	0	spare
2.13	255.255.255.240	14	0	1	1	ptp link Moscow
2.14	255.255.255.240	14	4	5	5	X.25 links
2.15	255.255.255.240	14	0	0	0	not used
Totals:			**46472**	**101**	**123**	

Note: Subnet 0 and subnet -1 are reserved by RFC1122, section 3.2.1.3. This restriction will soon go away because of the move to classless network numbers - most equipment is already able to use these as regular subnets.

Part D - Enterprise Allocation History

If any part of your organisation (including subsidiaries and the parent company) has received address space in the past, please specify the actual network numbers allocated. Please also give details of any applications for additional address space that have been rejected in the past. Finally please include a brief overview of your company structure, including details of the parent company, subsidiaries and contact persons.

At this moment in time, address space is a limited resource and all the Internet Registries are doing their best to ensure that it is used in an efficient and responsible way. The questions in this section are asked because we feel this information helps us progress towards our goal of ensuring a fair and efficient distribution of the remaining IP address space.

Part E - Contact Details

This section should be completed *ONLY IF* you are making an application on behalf of another organisation. Please indicate by whom the application is being made and on behalf of whom, giving all the contact details requested.

Part F - Non-European Requests

If you require address space for parts of the world that do not fall into the “European” category, you should not send your request to the RIPE NCC, but either to the Asian Pacific Regional IR which serves requests from the Asian and Pacific region, or as default for the rest of the world, the InterNIC, as the Global IR. “European” in this context refers to requests from what we traditionally understand to be the European borders, as well as the former Soviet Union, Eastern Europe, Mediterranean countries and parts of the Middle East. If in doubt, send your request to us and we will handle it appropriately.

EXAMPLE COMPLETED NETWORK, PERSON and TECHNICAL TEMPLATE

```
netname:       TBIT-2
descr:         Terabit Labs Inc.
descr:         Network Bugs Feeding Facility
descr:         Northtown
country:       NL
admin-c:       John E Doe
tech-c:        Mark A Smith
changed:       johndoe@terabit.nl 940625
source:        RIPE

person:        John E Doe
address:       Terabit Labs Inc.
address:       Industrial Estate North
address:       North Perpendicular Road 12
address:       NL-1234 Northtown
address:       The Netherlands
phone:         +31 20 987 6542 ext. 4711
fax-no:        +31 20 123 3467
e-mail:        johndoe@terabit.nl
 nic-hdl:      JD0401
changed:       johndoe@terabit.nl 940625
source:        RIPE

person:        Mark A Smith
address:       Terabit Labs Inc.
address:       Industrial Estate North
address:       North Perpendicular Road 12
address:       NL-1234 Northtown
address:       The Netherlands
phone:         +31 20 987 6542 ext. 4712
fax-no:        +31 20 123 3467
e-mail:        mark.smith@terabit.nl
 nic-hdl:      MS0403
changed:       mark.smith@terabit.nl 940625
source:        RIPE

request-type:  1 class C
machine-0:     100
machine-1:     134
machine-2:     250
subnet-0:      1
subnet-1:      1
subnet-2:      1
inet-connect   plan to connect: 950101 Net-Provider Inc
country-net:   NL
```

Recommended Reading List for Address Allocation and CIDR

- o rfc 1466.txt - Guidelines for Management of IP Address Space
- o rfc 1597.txt - Address Allocation for Private Internets
- o rfc 1219.txt - On the Assignment of subnet numbers
- o rfc 1519.txt - Classless Inter-Domain Routing (CIDR): an Address Assignement & Aggregation Srategy
- o rfc 1467.txt - Status of CIDR Deployment in the Internet

These documents are all available from the RIPE document store in the *rfc/* directory. The RIPE document store can be accessed in a number of ways:

- o on the Internet via anonymous FTP from host ftp.ripe.net
- o on the Internet via: telnet info.ripe.net
- o via the X.25 Public Data Network type: pad 0204129004331
- o via the mail server: send email to <mail-server@ripe.net> with "send help" in the body text

Organisations without connectivity wishing to obtain copies of the “Recommended Reading” articles should contact the RIPE NCC. A postal delivery of one or more documents is possible in exceptional cases.

"Non-Connected" Networks and RFC 1597

Current assignment guidelines require address space to be used efficiently. If there is no plan to connect the networks for which address space is requested, to the Internet, or if you wish to reserve some address space for administrative convenience, please evaluate if rfc1597 is appropriate for your network (or part thereof). This rfc contains important information regarding the Policies/Procedures that are to be implemented when IP address space is requested for networks that do not plan to connect to the Internet in the foreseeable future.

“Additional Hints” for Organisations Requesting Additional Address Space

When additional network numbers are needed by an organisation the application should include information on the utilization of address space already held by the same organisation. This information needs to include the number of actually used/unused IP network numbers, the number of actually installed subnets, hosts connected to these and more structural information which may be appropriate to substantiate the new request. This data for previously assigned network numbers provides essential input for global monitoring of utilization of IP address space and feedback to registry operation. To summarise the object of requesting this information is to:

- o ensure proper use is made of the available address space
- o have single contiguous blocks of addresses assigned if possible (so routing information can be aggregated)

For this a good estimate of real network requirements is needed and planning not just for the immediate needs or a specific parts of a network is encouraged.

“Additional Hints” for Organisations Requesting Class B Network Numbers

Please understand that the criteria for allocating Class B network addresses are extremely strict. This is due to the global scarcity of these network numbers. Out of necessity then, the local registry and the NCC has to closely examine each and every request received for a class B network address. As a result the allocation process will take longer. Organisations can however speed up the process by providing as much information as possible on their initial request to enable a decision to be made without having to request more information.The number of hosts estimate should be substantiated with other data about the network and/or organisation like number of employees, geographical distribution, type of hosts. The clearer you can document that your estimates are carefully derived, the easier it is for us to justify allocation of a class B address. The request for an addressing plan in Part C will help you structure some of the required information for this section.

Besides a sufficient number of hosts we must determine that your network cannot be engineered using a number of contiguous class C networks. If your network consists of a large number of physical networks with relatively small numbers of hosts on each, you will have to consider subnetting class C networks. A large number of subnetworks alone is not sufficient justification for allocation of a class B network number. We realise that a number of engineering decisions can be based on administrative convenience. Unfortunately the remaining class B address space is too small to take these considerations into account. The clearer your explanation is, as to why your network *cannot* be engineered using a block of class C network numbers, the easier it is for us to justify allocation of a class B network address.

All the above mentioned points apply even more strongly to cases where multiple class B network numbers are requested. Assignments of multiple class B network numbers will only occur when your local registry and the RIPE NCC are convinced with a detailed justification in terms of the criteria mentioned. Finally, please understand that we are not working against you, but with the whole Internet community to achieve a fair distribution of the remaining address space. If you have any questions about the procedure or the information needed, please do not hesitate to contact your local registry or the RIPE NCC for further guidance.

COMPLETE FORM BELOW AND DETACH HERE -

EUROPEAN INTERNET NUMBER REQUEST FORM

Email is preferred if you have it, if not then it is preferred if you send in your template by fax. This will help us to process your request more quickly. Please note that statements made in this form can be used in consideration of future applications that are made.

Once completed, please return this document to your local IR or to the RIPE NCC if this is more appropriate or if you are unsure (the address for the RIPE NCC is given on page 1).

IMPORTANT NOTE:

This document is valid until June 30st, 1995. An updated document will be sent out when due.

Part A - Administrative Details

The information supplied for this section together with the assigned network numbers will be entered into a database of European network numbers and their contact information which is accessible by the whole Internet community.

NETWORK TEMPLATE

netname: ______________________________

descr: ______________________________

descr: ______________________________

country: ______________________________

admin-c: ______________________________

tech-c: ______________________________

changed: ______________________________

source: **RIPE**

PERSON TEMPLATE

person: ______________________________

address: ______________________________

address: ______________________________

address: ______________________________

address: ______________________________

phone: ______________________________

fax-no: ______________________________

e-mail: ______________________________

nic-hdl: ______________________________

changed: ______________________________

source: **RIPE**

PERSON TEMPLATE

person: ______________________________

address: ______________________________

address: ______________________________

address: ______________________________

address: ______________________________

phone: ______________________________

fax-no: ______________________________

e-mail: ______________________________

nic-hdl: ______________________________

changed: ______________________________

source: **RIPE**

Please note that you will have to include a separate person template for each person referenced as a contact unless the information about the person in the RIPE database is still valid.

The information given above will be entered into a database of European network contacts which is accessible by the whole Internet community. Please refer to the RIPE NCC leaflet on the “Network Management Database” for details on how to query the database.

Part B - Technical Details

Information supplied below helps us to evaluate and process your request. It will be kept in strict CONFIDENCE and is for internal use only. It will NOT be entered into the RIPE Network Management Database.

TECHNICAL TEMPLATE

request-type: ______________________________

machine-0: ______________________________

machine-1: ______________________________

machine-2: ______________________________

subnet-0: ______________________________

subnet-1: ______________________________

subnet-2: ______________________________

inet-connect: ______________________________

country-net: ______________________________

Part C - Network Details

If you are applying for more than 2 Class C network numbers, then please submit a description of your network layout, including all devices which will require unique IP addresses. If you already hold address space and are now applying for more address space, please complete this section. If your network is bridged, please indicate this and provide some indication of the necessity of using bridging instead of routing. The more detail you supply in this section, the easier it will be for us to evaluate your case and allocate you your requested IP numbers.

Current network layout

Network deployment plans: (year 1 & year 2)

(please ensure you have read the “Additional Hints” section on organisations requesting additional class C numbers or class B numbers). Please describe your planned allocation of the requested address space.

Addressing plan

Please give an overview of your addressing plan. Please continue on a separate sheet if necessary.

		Number of hosts per subnet for:				
Subnet	Subnet mask	Max	Now	Year-1	Year-2	Location

Part D - Enterprise Allocation History

If any part of your organisation (including subsidiaries and the parent company) has received address space in the past, please specify the actual network numbers allocated. Please also give details, if any applications for additional address space have been rejected in the past. Finally please include a brief overview of your company structure, including details of the parent company, subsidiaries and contact persons. Please continue on a separate sheet if necessary.

Part E - Contact Details

Complete the section below *ONLY IF* you are making an application on behalf of another organisation.

This application is made by:

name: ______________________________

organisation: ______________________________

country: ______________________________

phone: ______________________________

fax-no: ______________________________

e-mail: ______________________________

On behalf of the following organisation:

name: ______________________________

organisation: ______________________________

country: ______________________________

phone: ______________________________

fax-no: ______________________________

e-mail: ______________________________

Part F - Non European Requests

If your request is for the Asian-Pacific Region you should sent your application form to: AP-NIC, c/- University of Tokyo, Computer Centre, 2-11-16 Yayoi, Bunkyo-ku, Tokyo 113 Japan. Telephone: +81 3 5684 7747, fax: +81 3 5684 7256. Email: <hostmaster@apnic.net>

The InterNIC serves as default for the rest of the world. Their contact details are: Network Solutions Inc, Attention: InterNIC Registration Service, 505 Huntmar Park Drive, Herndon, VA 22070, USA. Telephone: +1 703 742 4777, fax: +1 703 742 4811. Email: <hostmaster@rs.internic.net>