Réseaux IP Européens

Network Coordination Centre

RIPE ncc

QUARTERLY REPORT

Issue 3
December 1992

Document-ID: ripe-79

RARE

logo
ommitted
1/2 MByte

The RARE association provides the framework for NCC operations.

RIPE NCC, Kruislaan 409, 1098 SJ Amsterdam, Netherlands

Telephone: +31 20 592 5065 Fax: +31 20 592 5090

E-Mail: ncc@ripe.net

Table of Contents

Introduction

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 their desktop with a uniform IP service irrespective of the particular network his or her workstation is attached to. In December 1992 more than 284,000 hosts throughout Europe are reachable via networks coordinated by RIPE. The total number of systems reachable worldwide is estimated at more than one million.

The RIPE Network Coordination Centre (RIPE NCC) is a European organisation chartered to support all those RIPE activities which cannot be effectively performed by volunteers from the participating organisations. As such, it provides a wide range of technical and administrative support to network operators in the Internet community across Europe. The charter of the NCC is formally described in the NCC Activity Plan (document `ripe-35` in the RIPE document store). The RIPE NCC currently has 3 permanent staff members. The RARE association provides the formal framework for the NCC. Funding for the first year of operation of the NCC is provided by EARN, the national members of RARE, Israel and EUnet.

This is the third quarterly report produced by the RIPE NCC. As before, comments and suggestions are very welcome.

Note on Statistics

The arrangement of categories including country codes in some statistical tables and figures have been standardised to make the data more easily comparable between different tables and editions of these reports. As a consequence some categories appear with no data and/or seemingly nonsensical combinations.

In the PostScript version of this document much information is presented both in graphical and in table form. This apparent duplication is necessary because the graphics cannot be represented in the ASCII version of the document which has to contain the same information as the PostScript version.

Management Summary

RIPE NCC services have been running smoothly during the reporting period. We have made numerous small improvements in a number of areas. No major additional activities have been started. In general the three months have been used to further consolidate the services and activities as well as the procedures for interaction with external organisations, mainly the local Internet registries.

Delegated Internet Registry

Procedures for the European Internet registry have been further consolidated and continue to run smoothly. More than 6000 network numbers have been assigned during the reporting period. Interactions with the global Internet registry can still be improved.

RIPE Database

The next big functional improvement of the RIPE database will be the inclusion of routing information. To this end an update procedure for this information has been designed and implemented. During the next period the specifications for the representation of routing information will be refined and the database populated with this information.

Information Services

The NCC information services have been running smoothly and continue to be well used. We have installed a World Wide Web (WWW) server in order to provide an additional access method to the RIPE document store.

New Projects

Preparations have been made for the start of project work to be executed at the NCC in conjunction with the RARE technical programme. One of these projects is expected to help with the adding of routing information to the database.

Priorities

There still have not been enough resources to actively pursue activities from the activity plan which so far have not been started. The NCC still seeks guidance from RIPE as to the relative priority of these activities

Activities

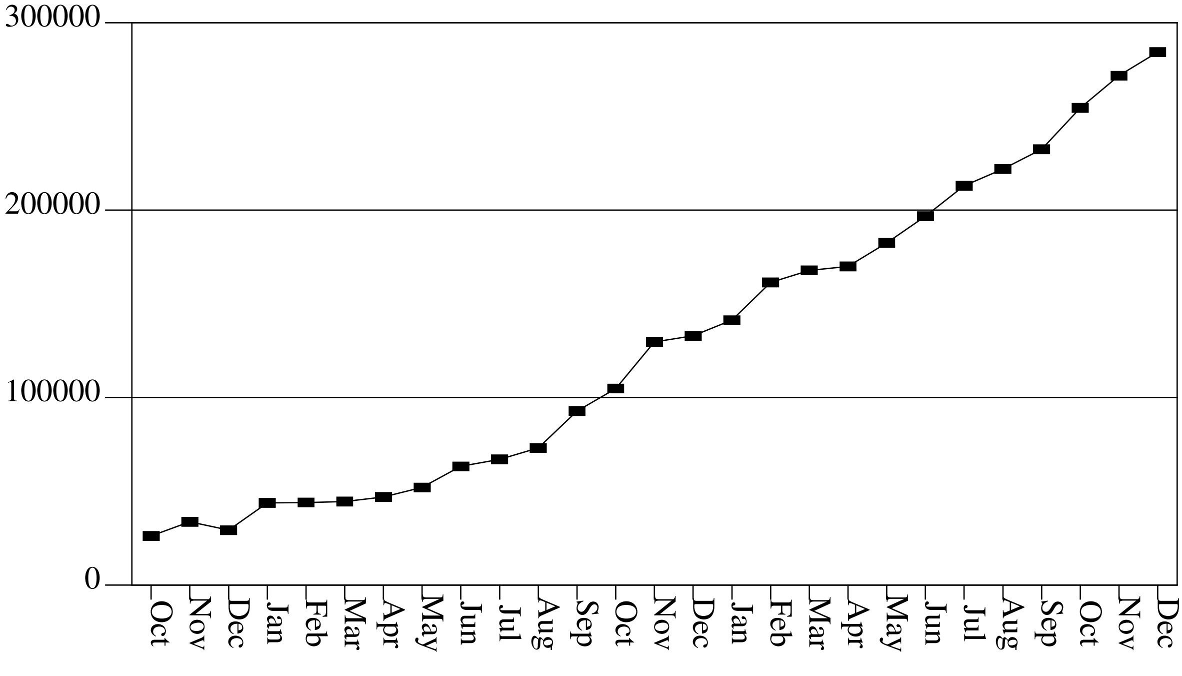
DNS Coordination

There has been a slight change in the collection process for the DNS data for the RIPE Hostcount. For the two largest countries, Germany and the United Kingdom, the collection of the data is done within the country, and afterward collected at the NCC, for inclusion in the statistics. This change was done to decrease the time needed for gathering all the data, as well as to decrease the impact of connectivity problems encountered when gathering all data centrally. Organisations willing to participate in the distributed counting mechanism should contact the RIPE NCC.

Other than that, nothing much has changed in the procedure. The latest hostcount shows a total of over 284,000 hosts in Europe.

In the hostcount, any machine that appears in the Domain Name System with a A record is counted as a host. Hosts with more than one A record are only counted once, and hosts with the same A record, but different domain names inside the same top level domain are also counted just once. All DNS output, not just the A records, are saved and are available in the RIPE document store, two files for each country: the standard output, and the error messages. Please check the README file in ftp.ripe.net:ripe/hostcount for more details.

RIPE DNS Hostcount History 1990-1991-1992



1990	Oct	26141
	Nov	33665
	Dec	29226
1991	Jan	43799
	Feb	44000
	Mar	44506
	Apr	46948
	May	52000
	Jun	63267
	Jul	67000
	Aug	73069
	Sep	92834
	Oct	104828
	Nov	129652
	Dec	133000
1992	Jan	141308
	Feb	161431
	Mar	167931
	Apr	170000
	May	182528
	Jun	196758
	Jul	213017
	Aug	221951
	Sep	232522
	Oct	254585
	Nov	271795
	Dec	284374

Internet Registry

Delegated Registry

In the last quarterly report (RIPE document ripe-73) the recent changes in the administrative arrangements for obtaining IP numbers were described. Briefly under the new arrangements from August 1st 1992 onwards all European requests for IP numbers have been forwarded by the global Internet registry (IR, otherwise known as `hostmaster@nic.ddn.mil`) to the RIPE NCC for processing. Thus the RIPE NCC has successfully fulfilled the role of regional Internet registry for a period of 5 months, handling both e-mail, fax and letter applications. This means that Europe is operating for quite some time already ahead of schedule at stage 3 of the 'Schedule for IP Address Space Guidelines' (RFC1367).

Recently some slight problems have manifested themselves in the interaction between the RIPE NCC and the global registry. We assume that this is mainly due to general cautiousness of the IR caused by the ongoing solicitation procedure for the INTERNIC in the US. Since an award has been made on the very last day of the reporting period we will now work to get these problems resolved quickly. Our reporting of the problems should not be construed as criticism of the IR or the people involved there. The working relationship with them has been excellent.

Registration Procedures

Current procedures as described in the last quarterly report and document ripe-72 have been streamlined and improved upon significantly. Facilitating this, has been the increase in the number of local registries. Especially the number of local 'non-provider' registries has increased. These are registries to whom the NCC is able to forward all requests from organisations without IP service providers. The work of the 'non-provider' registries is much appreciated, especially since they are not charging for this community service. Also additional IP service providers have made themselves known to the NCC, enabling further delegation of blocks of class C numbers.

To date, local non-provider registries exist for the following countries: Austria, Switzerland, Germany, Denmark, Spain, France, Great Britain, Hungary, Israel, Italy, The Netherlands, Norway, Poland, Sweden and The Soviet Union (covering the states/countries which comprised the former Soviet Union). New registries established since the last quarter comprise Denmark, Poland and Italy.

We are also beginning to notice a shift in the flow of requests. There are more direct requests coming into the NCC, bypassing the global registry. This is due to information about new procedures slowly spreading throughout the Internet.

Thus when an application is received by the NCC for an IP network number there are two possible actions. Either the application is forwarded to a local registry and a letter is sent to both the applicant and the local registry informing them of the action. Included in the letter are contact details for the relevant local registry. Alternatively, if no appropriate local registry exists, the application is processed directly by the NCC.

The local registries send information about the assignments they make to a special mailbox at the NCC for automatic inclusion in the RIPE database and forwarding to the global registry. During the reporting period the latter forwarding has been automated using a general exchange format for Internet registration databases agreed by the DDN NIC (global registry), MERIT and the RIPE NCC. The RIPE NCC has fully implemented automatic forwarding of all European assignments using this exchange format. However the automatic forwarding procedure has been stopped on request of the DDN NIC until the necessary software is operational there.

Class B Network Numbers

The NCC still performs all actual class B assignments. The current procedure is to briefly evaluate the request, if needed consulting an appropriate local registry. In approximately 80% of the cases the request is found unjustified according to the criteria agreed with the global registry and IANA (see RFC1136). In these cases the NCC forwards the request to the appropriate local registry for assignment of class C network number(s). If a class B network number is justified, the NCC will allocate out of a small pool it keeps for this purpose and notifies any local registry involved.

During the reporting period the pool has been depleted down to 3 network numbers. The NCC has requested another 20 numbers from the Internet registry. To date this request has not been fulfilled with reference to RFC1366. RFC 1366 reads: ‘The IANA and the IR will maintain sole responsibility for the Class B number space. Where there are designated regional registries, those registries will act in an auxiliary capacity in evaluating requests for Class B numbers.’ When the RFC was discussed at the Paris RIPE meeting the expectation was that the definition of “sole responsibility” would not mean a change in actual procedures. Apparently now the procedures have changed and it is not clear what the actual procedures are, e.g. whether the RIPE NCC is being consulted by the global registry on all European B requests.

We feel that a four stage consultation process is not workable since there are too many problems and misunderstandings in the flow of information between requester, global registry, RIPE NCC and local registry. We therefore propose to continue working with the present procedures. In our opinion RFC1366 need not be changed for that. The formal responsibility should still be with IANA, however IANA should delegate that responsibility to the NCC for Europe just as it delegates it to other registries for other parts of the world. In the meantime we have not changed our B allocation procedures working from the block of numbers currently reserved.

As mentioned in the last quarterly report some European organisations still have (sometimes quite large) blocks of class B numbers. The total extent of this is presently unknown as we do not know which European organisations hold such blocks. At the last meeting RIPE asked the NCC to try to recover as many as possible of such unused class B network numbers. In order to start this repeated requests were made to the Internet Registry for details of all European allocations of class B's. To date no information has been received. We will therefore publish a request to all European organisations holding such blocks to return them to the RIPE NCC.

Reverse Name Lookup for 193.x.y.0 Networks

On behalf of the local registries the NCC has proposed to the IR to delegate the DNS zone `193.in-addr.arpa` to the RIPE NCC. This would enable us to delegate subdomains corresponding to block allocations to the local registries. The advantage of this procedure would be that a local registry assigning a (block of) class C addresses could make reverse name lookup operational immediately without involvement of the IR. This decentralised procedure would be much quicker than the present one and prevent lots of user confusion, since the data will be maintained much closer to its source. The IR has reacted positively to this proposal but no concrete action has resulted during the reporting period.

Common Template

In the last quarterly report, the need for a common European registration template was identified. The aim of the common template is to simplify and streamline the handling of IP network number requests and allocations across Europe. By improving the quality of information received on each application, especially with regard to applications for class B network numbers, it is anticipated that the processing time for each application will decrease. During the reporting period the NCC with the help of local registries has drafted a template form and the accompanying documentation. This template will be discussed at the coming RIPE meeting.

NCC Workload and Performance

In order to quantify the workload generated at the NCC and to monitor the service quality, the NCC has kept a log of actions related to the delegated registry function. The statistics below relate to the period October - December. Direct comparisons cannot be made with the previous statistics reported in the last quarter (numbers in brackets) since the reporting period for these statistics covered mid August until the end of September.

The total number of applications received over the last quarter was 178 (172). Of these 97 (100) were received from the IR, 5 (13) were received from the local registries and 76 (59) were sent directly to the NCC. We have not logged most cases where we just passed on the address of the appropriate local registry without receiving an actual application. The most significant of these statistics concerns the number of applications now being sent directly to the NCC. This is a result of the information pointer referring to the NCC as the European Registry in the IR archives and other places. It also shows that a lot of information still circulating does not refer to the RIPE NCC.

The most frequently used method of applying for IP numbers is still paper (including faxes) accounting for over 50% of the total number of applications. Faxes account for 65% of the information sent out by the NCC. This reflects the fact that many organisations do not have e-mail connections. Applications from those organisations that do have e-mail connectivity comprise approximately 30%. Telephone applications account for 11% of the total again without counting simple referrals to local registries by telephone.

FAX software which enables NCC staff to send and file outgoing FAX messages from within their e-mail environment has now been installed. This has quite significantly reduced the overhead associated with replying to incoming faxes. This is evident in the statistics which show that 86% (63.4%) of all requests were answered (not only acknowledged) on the day they were received. 97.4% of all requests were processed within 7 days. Given that this figure includes dealing with class B requests, which often require further information to be sought from the applicant which is a time consuming process, the response times are very good. Achieving such excellent response times could not be achieved without the help of the local registries. Our thanks are extended to them for their work.

Address Space Usage

During the reporting period the NCC assigned 11 class B network numbers, delegated 39.5 blocks of class C network numbers and reserved 16.5 blocks of class C network numbers. The assignment and reservation of class C blocks was done in accordance with the CIDR scheme to allow route aggregation in the future. It should be noted that blocks are reserved based on usage estimates given by the local registries for a period of about 24 months. Should the assignment rate differ from the estimated one, reserved blocks can and will be used for other purposes if necessary.

During the reporting period the European registries have assigned a total of 6015 class C networks to bring the total of networks assigned from blocks delegated by the NCC to 7113.

The detailed status of the address space delegated to the RIPE NCC can be found in “Appendix B” on page 26 and “Appendix C” on page 27 for class B and class C network numbers respectively.

RIPE Network Management Database

Database Software

The database software has been released for use by local registries.

Unfortunately some minor extensions agreed at the last meeting have not been incorporated during the reporting period. They will be included during the next quarter. Fortunately no complaints have been received about this.

During the previous quarter the database support (update) software had been revised to add functionality and be more readily configurable. During the reporting period similar improvements for the database software itself have been studied. After some study, prototype software had been written in the PERL language showing the feasibility of functionality improvements.

Database Updates

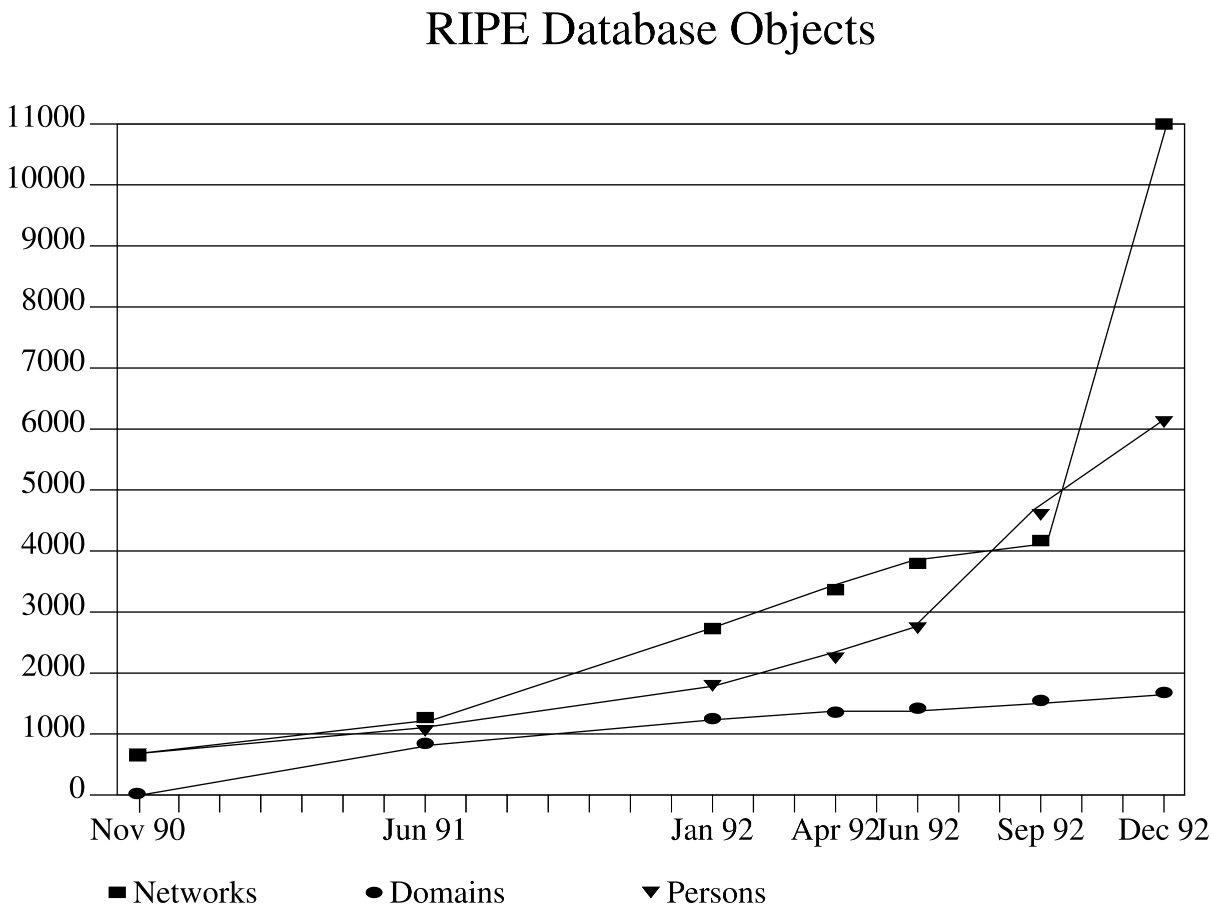
The frequency of update runs remains at once per working day with an occasional run skipped and some days with multiple runs as demanded by the volume of updates received. This ensures that users perceive the database update process as predictable. During the reporting period the NCC has processed 14425 object updates, an average of 240 per working day. The number of updates received per month varies widely with peaks usually occurring just before RIPE meetings.

The updates consist of additions and changes as well as so called “NOOPs”. NOOPs are updates received which do not differ from the information already recorded in the database. The NCC accepts such requests because it makes bulk updates from secondary NICs easier: secondary NICs can just send in their whole database without having to select just the records which changed since the last bulk update was sent to the NCC.

Database Action	June 1992 (number)	June 1992 (perc)	Q3 1992 (number)	Q3 1992 (perc)	Q4 1992 (number)	Q4 1992 (perc)
Updated	286	16%	1372	8%	9235	64%
Added	483	27%	2505	14%	3632	11%
NOOP	1005	57%	13578	78%	1558	25%

Database Statistics

The number of networks in the database has increased significantly due to the large number of newly assigned class C network numbers.



Month	Nets	Persons	Domains
Nov 90	643	670	0
Jun 91	1270	1053	845
Jan 92	2728	1792	1254
Apr 92	3365	2242	1360
Jun 92	3797	2736	1422
Sep 92	4172	4594	1549
Dec 92	11080	6116	1680

The database coverage has increased slightly but is still lower than it should be.

Country	Nets in DNS	Nets in DB	Percentage Q2	Percentage Q3	Percentage Q4
SI	1	1	-	-	100.0
BE	9	9	100.0	100.0	100.0
CS	26	26	100.0	100.0	100.0
HU	8	8	100.0	100.0	100.0
TN	1	1	100.0	100.0	100.0
YU	4	2	100.0	100.0	50.0
FR	383	362	94.1	95.5	94.5
ES	24	23	91.7	88.9	95.8
CH	103	88	87.6	93.1	85.4
IE	22	19	87.5	90.9	86.4
PL	22	22	86.7	90.0	100.0
PT	51	44	85.0	80.0	86.3
IT	122	99	84.5	82.4	81.1
NL	110	95	82.9	80.9	86.4
DE	394	327	82.5	80.5	83.0
GR	12	9	78.6	66.7	75.0
IS	6	5	75.0	50.0	83.3
IL	25	19	73.9	71.4	76.0
UK	280	198	67.3	67.8	70.7
AT	76	63	67.2	63.8	82.9
SE	174	104	57.8	49.3	59.8
NO	54	38	56.9	58.5	70.4
DK	28	11	45.0	40.0	39.3
LU	5	3	33.3	50.0	60.0
FI	196	77	8.8	6.9	39.3

Worldwide Database Coordination

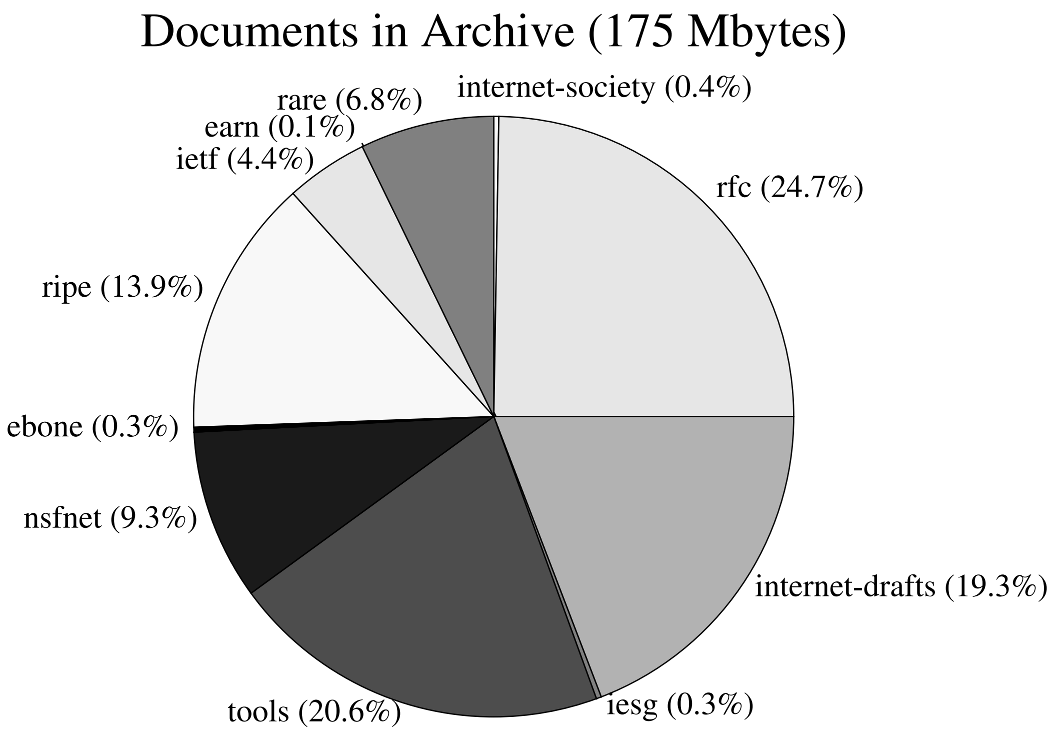
The NCC has developed software to generate and accept the recently agreed registry database exchange format. During the reporting period there was little progress while we are waiting for the other registries to be ready for test exchanges.

Routing Information

A separate update procedure for routing information has been designed and implemented. This procedure will be used by routing ‘guardians’ to control network membership to routing related groups of networks.

The RIPE NCC has also helped to start refining the representation of routing information in the database in order to make it better understandable and better meet the current environment. In this context a project has been defined which will make use of the routing information stored in the database to provide routing service for European networks to the Global Internet Exchange (GIX).

Document Store



The document store is maintained as a reference point for information that will be useful to network service providers, NICs, NOCs alike. The documents stored relate to a wide variety of networking topics. For example, information can be obtained about the activities EBONE, the Internet Engineering Task Force (IETF) and the Internet Engineering Steering Group (IESG), RARE, and not least, documents relating to RIPE itself. In addition the document store contains information relating to Internet drafts and RFC's. In addition the EARN newsletter is now available in subdirectory EARN. All four editions of the newsletter (from 1992) are available.

In total the document store contains approximately 2100 documents. By volume, it accounts for over 175 Mbytes.A breakdown of the composition of the document store is shown below

Area	Files	KBytes
rfc	618	41772
tools	183	39006
internet-drafts	565	33418
nsfnet	119	15788
ripe	326	23505
rare	209	11419
ietf	756	7475
iesg	46	467
ebone	29	491
internet-society	19	665
earn	5	167

Revision of the RIPE archives

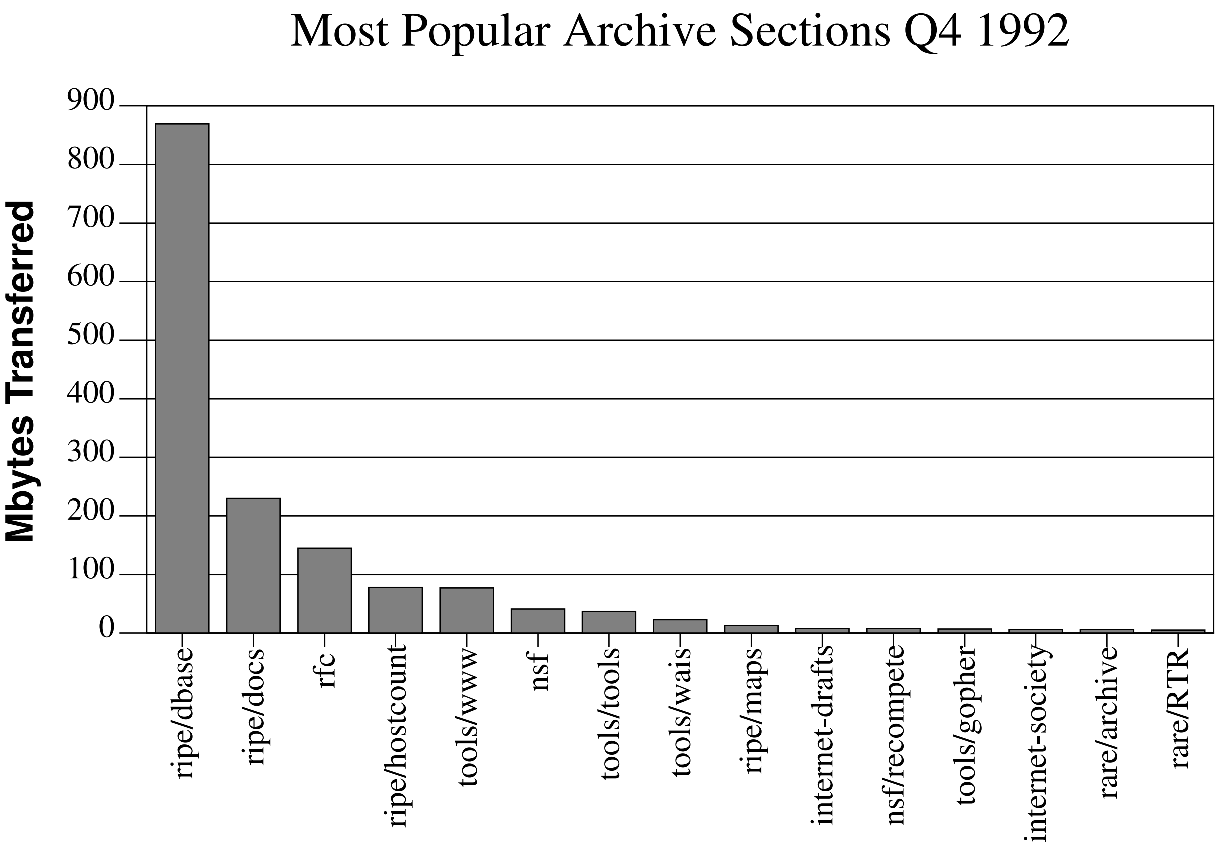
As reported in the last quarterly report, the RIPE archives in the document store have been substantially revised in both structure and format. All RIPE documents are now located in a `ripe/docs/` directory, which is further divided into the following subdirectories:

```
ripe-agenda/
ripe-current/
ripe-docs/
ripe-drafts/
ripe-minutes/
```

Accessing the Document Store

The NCC document store can be accessed through a variety of methods. Besides methods of access as previously reported, (via anonymous ftp to `ftp.ripe.net` and by using GOPHER and WAIS clients to `gopher.ripe.net` or `wais.ripe.net` respectively and through the NCC Interactive Information Server) the document store can now be accessed via pilot World Wide Web (WWW). WWW is a method of presenting information based on the user making choices of key words (indicated with a number in brackets at the side of the word) which on selection "expand" to give a deeper level of information relating to that word. WWW is currently at the pilot stage.

FTP Usage Statistics



The most popular archive sections of the RIPE document store are tabulated below. This displays the top 15 most popular sections which were accessed using ftp.The most popular section is the ripe database, with approximately 870 Mbytes transferred:

Archive Section	Files Sent	Bytes Sent	% of files sent	% of bytes sent
ripe/dbase	991	869400847	11.05	54.45
ripe/docs	2133	230213789	23.79	14.42
rfc	1787	145185345	19.93	9.09
ripe/hostcount	714	77633923	7.96	4.86
tools/www	297	76948856	3.31	4.82
nsf	400	41090123	4.46	2.57
tools/conf	91	36996454	1.01	2.32

Archive Section	Files Sent	Bytes Sent	% of files sent	% of bytes sent
tools/wais	140	23403957	1.56	1.47
ripe/maps	185	13464608	2.06	0.84
internet-drafts	122	8453373	1.36	0.53
nsf/recompete	55	8185394	0.61	0.51
tools/gopher	99	7288116	1.10	0.46
internet-society	80	6687213	0.89	0.42
rare/archive	240	6191833	2.68	0.39
rare/RTR	24	5170989	0.27	0.32

The number of Mbytes transferred using ftp per top level domain is shown below:

Domain Name	Number of Files Sent	Number of Bytes Sent	% of files sent	% of bytes sent
IIS	0	0	0	0
IXI	0	0	0	0
LOCAL	0	0	0	0
NCC-X25	0	0	0	0
PSPDN	0	0	0	0
UNKNOWN	503	51204567	5.61	3.21
at	99	9180269	1.10	0.57
au	12	900048	0.13	0.06
be	83	14129626	0.93	0.88
br	5	934156	0.06	0.06
ca	38	2385199	0.42	0.15
ch	503	144382113	5.61	9.04
cl	1	1970	0.01	0.00
com	489	124706428	5.45	7.81
cs	107	4604605	1.19	0.29
de	906	87395617	10.10	5.47
dk	61	9234800	0.68	0.58
edu	543	121280238	6.06	7.60
ee	0	0	0	0
es	169	8976533	1.88	0.56
fi	958	292153550	1	10.68
fr	174	39248067	1.94	2.46
gov	52	11432336	0.58	0.72

Domain Name	Number of Files Sent	Number of Bytes Sent	% of files sent	% of bytes sent
gr	573	78543493	6.39	4.92
hk	0	0	0	0
hu	85	4844867	0.95	0.30
ie	65	6104140	0.72	0.38
il	16	3507391	0.18	0.22
in	15	706370	0.17	0.04
is	6	802145	0.07	0.05
it	507	67243159	5.65	4.21
jp	0	0	0	0
kr	0	0	0	0
lu	7	1943250	0.08	0.12
mil	52	4559751	0.58	0.29
mx	0	0	0	0
net	928	280696668	10.35	17.58
nl	408	77324692	4.55	4.84
no	39	14880150	0.43	0.93
nz	0	0	0	0
org	28	4594701	0.31	0.29
pl	283	16785025	3.16	1.05
pt	954	92687125	10.64	5.80
se	185	9761543	2.06	0.61
sg	1	47975	0.01	0.00
su	0	0	0	0
tw	5	191270	0.06	0.01
uk	87	8169431	0.97	0.51
us	1	134	0.01	0.00
yu	14	1137922	0.16	0.07
za	4	92910	0.04	0.01

The UNKNOWN category refers to where there is no match found between the IP address and the Domain Name.

Interactive Information Server

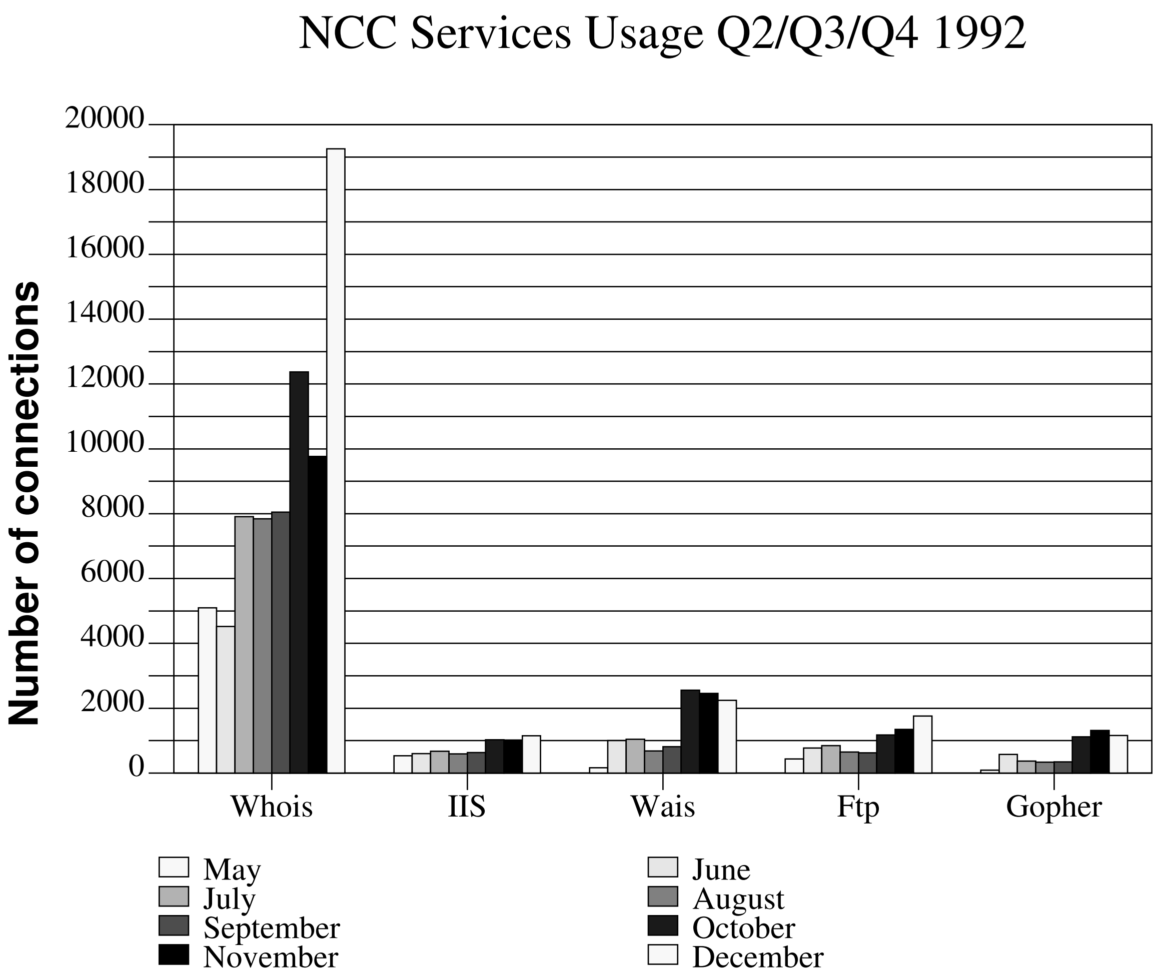
Once again the NCC would like to stress the idea behind the Interactive Information Server (IIS) and to encourage its usage. Therefore we make no apologies for repeating the information (although abbreviated) in this paragraph.

The goal of the IIS is to enable users with minimal hardware and/or software support to access information stored by the NCC. The IIS is also the most convenient method to access the RIPE document store from networks which are not IP based. At the same time it caters for those occasional users who do not choose to run or learn the local WAIS, GOPHER etc. clients. It is possible to access the information in the document store using both `telnet` and `pad` connections. In addition the server provides an interface to a number of clients enabling a wide range of information to be accessed in a number of different ways. Currently these comprise WAIS, Gopher and WHOIS. For details on how to use the IIS, please refer to our information leaflet “Interactive Information Server” or see the first edition of the NCC Quarterly Reports.

General Service Usage Statistics

Statistics for the use of the various NCC information services were collected for the fourth quarter of 1992 The table below shows the total number of connections made for each service (Whois, IIS, Wais, Ftp and Gopher) contacted either directly from a user client or from the NCC Interactive Information Service. The breakdown is given as total number of connections per month:

Service	Jul	Aug	Sep	Oct	Nov	Dec
Whois	7909	7845	8044	12373	9769	19255
IIS	669	591	628	1027	1018	1148
Wais	1040	682	816	2552	2460	2240
FTP	849	645	625	1173	1344	1757
Gopher	371	337	340	1115	1318	1156



For technical reasons, GOPHER logging does not appear in this overview, since the logging is done in very different manner than all other services.The number of connections to the various servers at the NCC broken down by the source of the request is shown in the table below.

Source	Whois	IIS	Wais	Ftp	Total
IIS	3709	0	3296	0	7005
IXI	9	569	0	0	578
LOCAL	727	78	53	177	1035
NCC-X25	11	41	0	0	52
PSPDN	1	1	0	0	2
UNKNOWN	521	337	94	228	1180
at	263	65	62	38	428
au	15	6	24	6	51
be	207	18	0	43	268

Source	Whois	IIS	Wais	Ftp	Total
br	1	2	0	7	10
ca	50	36	9	45	140
ch	674	45	15	216	950
cl	6	0	1	0	7
com	56	32	444	380	912
cs	81	54	0	20	155
de	761	65	7	257	1090
dk	89	4	10	21	124
edu	5529	162	501	432	6624
ee	0	3	0	0	3
es	32	4	1	12	49
fi	142	11	14	111	278
fr	853	104	15	86	1058
gov	31	6	16	14	67
gr	66	3	0	55	124
hk	0	0	0	1	1
hu	127	33	0	13	173
ie	193	33	0	26	252
il	8	13	0	10	31
in	0	2	0	1	3
is	40	0	6	3	49
it	347	38	1	107	493
jp	8	1	10	1	20
kr	1	4	0	0	5
lu	14	27	0	5	46
mil	20	41	6	23	90
mx	0	0	0	1	1
net	1299	25	32	172	1528
nl	1463	138	28	254	1883
no	1943	4	0	8	1955
nz	1	0	0	0	1
org	2182	8	5	16	2211
pl	55	17	0	36	108
pt	207	10	11	25	253
se	760	29	3	22	814
sg	9	0	2	0	11
su	0	3	0	0	3

Source	Whois	IIS	Wais	Ftp	Total
tw	4	4	0	5	13
uk	444	83	124	43	694
us	8659	1	2	1	8663
yu	10	15	0	8	33
za	0	0	0	1	1
Total	31628	2175	4792	2930	41525

In total there were 2175 connections to the Interactive Information Server, which is queried, on average, 35 times per working day.

The provisional access from the IXI network has been used 569 times during the reporting period, slightly less than 10 times per working day on average. This service will have to be discontinued once the IXI connection at NIKHEF which it uses is disconnected unless alternative access can be found.

RIPE NCC Information Leaflets

Information leaflets describing the RIPE Network Management Database and the Interactive Information Server were printed last quarter. Copies of these leaflets are still available. Postscript versions of the leaflets can be obtained from the RIPE document store (documents `ripe-77` and `ripe-78`). Alternatively we are more than happy to supply hard copies of the leaflets.

Presentations

Once again the NCC would like to stress that it is considers it a priority to clarify both the existence and the role of the NCC in relation to the multitude of networking organisations. Clearly the larger the audience, the easier this task is. To this end the NCC will give presentations about its activities wherever appropriate and possible. Therefore we encourage all those organisations wishing to convey the work of the RIPE NCC to others to contact the NCC with a request for a presentation.

Presentations about RIPE and the RIPE NCC have been given at a meeting of the German Internet Formum DIGI in Munich, Germany in November.

ACONET has contacted the NCC with a request for a presentation, which is to be given at The 4th Network Seminar and Intensive Course for Scientists and Network Managers from Central Europe by Marten Terpstra on February 22nd/23rd.

RIPE Support Activities

RIPE meetings

Currently RIPE meetings take place three times a year. From its initiation on April 1st 1992, the RIPE NCC was chartered to provide support to all RIPE meetings.

The meetings are open to all Internet service providers, and enable both formal and informal information gathering, the exchange of ideas and debate. In addition it is at RIPE meetings where the members of the 9 RIPE working groups can meet face to face to discuss and progress their work.

The NCC welcomes suggestions for support from participants for future RIPE meetings

RIPE meetings - support

A detailed checklist describing the preparation necessary to host a RIPE meeting has been drawn up. In this way it is hoped that it will give potential hosting organisations as well as the RIPE NCC a clear idea of what is involved in hosting a RIPE meeting away from home. It should be mentioned here that the number of participants to successive RIPE meetings continues to increase significantly at each meeting, enhancing the size of the venue and level of support required.

In addition to the checklist, RIPE meeting site visits have been initiated for all future RIPE meetings scheduled outside Amsterdam. This gives the NCC an opportunity to meet the local organisers, see the proposed venue and generally walk through the checklist. A site visit was carried out in December to the meet the organisers of the Prague RIPE meeting at the Czech Technical University.

New Working Group

At the 12th RIPE meeting held in Paris, a new working group, local-ir (local internet registries) was established. The aim of this new group is to promote discussion to achieve greater coordination and cohesion between local registries on issues relating to the allocation of IP numbers. The current chairman of the group is Daniel Karrenberg

Referrals and End-User Enquiries

Again the number of referral requests and end-user enquiries has not been significant during the reporting period. Most queries have been related to either requests for IP numbers or dealt with by the mailing list for IP Providers. See the previous quarterly report for details of this list.

General Set Up

The general server and each of the personal workstations used by the NCC staff have benefited from addition of 16MB of memory.

The NCC library has expanded thanks to the kind donation by NLnet (Dutch part of EUnet) of recently published books by O'Reilly Associates, Inc.

We also would like to thank NetCS of Berlin for their kind donation of FAX software for the NCC Sun workstations.

Acknowledgements

The RIPE NCC wishes to thank the RARE Secretariat for their excellent support throughout this quarter.

We wish also to thank the local registries for their excellent work, especially with regard to the allocation of IP numbers

Appendix A

Meetings Attended

The following meetings were attended by staff during the second quarter of the RIPE NCC operations.

Date	Name & Location	Attendee
Nov 10-12	DIGI Munich	Marten Terpstra Daniel Karrenberg
Nov 16-20	IETF Washington, USA	Marten Terpstra Daniel Karrenberg
Dec 17	Czech Technical Univ, Prague, CS	Anne Lord

Appendix B

Class B Network Number Allocations to Date

The table below summarises all assignments of class B network numbers made through the RIPE NCC to date. The "Via" column indicates through which registry the NCC received the request and solicited the necessary justification.

Network Number	Via
160.44-160.52	DE-NIC
160.53	SWITCH
160.54-160.58	DE-NIC
160.59	SWITCH
160.60	DE-NIC
160.61-160.62	CH NIC
160.63	SWITCH
163.156-163.157	RIPE NCC
163.158	CH NIC
163.159-163.160	RIPE NCC
163.161	SWITCH
163.162	GARR
163.163-163.165	RIPE NCC
163.166	ICNET
163.167	JANET
163.168-163.175	RIPE NCC
164.1	RIPE NCC
164.2	RIPE NCC
164.3	EUnet/AT
164.4	SE NIC
164.5	RIPE NCC
164.6	PIPEX
164.7	RIPE NCC
164.8	ARNES
164.9	SE NIC
164.10	SE NIC
164.11	JANET
164.12	RIPE NCC

Network Number	Via
164.13	Telecom Finland
164.14	RIPE NCC
164.15	RIPE NCC
164.16-164.34	DE-NIC
164.35	RIPE NCC
164.36	RIPE NCC
164.37-164.40	free

Appendix C

Class C Block Allocations to Date

The table below summarises the delegation status of the class C network number blocks allocated through the NCC and the number of networks allocated from these blocks. The “p/n” column indicates whether the block in question is delegated to the local registry of a service provider or is used to allocate numbers to organisations without a service provider.

It should be noted that blocks are reserved based on usage estimates given by the local registries for a period of about 24 months. Should the assignment rate differ from the estimated one, reserved blocks can and will be used for other purposes if necessary.

Block	p/n	nets assigned	Country	Registry
192.162	?	26	NCC	Miscellaneous TN,RO,PT
192.164	p	238	AT	EUnet/AT
192.165	?	192	SE	NORDUnet
192.166	?	176	DE	DE-NIC
192.167	?	154	IT	GARR
192.168	p	0	EU	EUnet/NOC
193.0	?	free	none	NCC
193.1	p	7	IE	HEANET
193.2	p	13	YU	ARNES
193.3	?	84	DK	EUnet/DK
193.4	?	17	IS	Iceland everything
193.5	p	42	CH	SWITCH
193.6	p	149	HU	Sztaki
193.7	p	0	DE	chambers of commerce DE-NIC
193.8	n	20	CH	non-provider CH-NIC
193.9	n	160	EU	NCC non-provider European
193.10	p	17	SE	SUNET
193.11	p	resvd	SE	SUNET
193.12	p	81	SE	SWIPNET
193.13-15	p	resvd	SE	SWIPNET
193.16	n	150	DE	non-provider DE-NIC
193.17	n	90	DE	non-provider DE-NIC

Block	p / n	nets assigned	Country	Registry
193.18	n	254	DE	non-provider DE-NIC
193.19	n	0	DE	non-provider DE-NIC
193.20	n	256	DE	non-provider DE-NIC
193.21	n	0	DE	non-provider DE-NIC
193.22	n	165	DE	non-provider DE-NIC
193.23	n	120	DE	non-provider DE-NIC
193.24-31	n	resvd	DE	non-provider DE-NIC
193.32	p	214	UK	non-provider UK-NIC
193.33-34	n	resvd	UK	Sainsbury's (multiple B request)
193.35-39	n	210	UK	non-provider UK NIC
193.40	n	3	EE	NCC non-provider EE
193.41	n	resvd	EE	non provider EE
193.42	n	86	IT	non provider IT NIC
193.43	n	resvd	IT	non provider IT NIC
193.44	p	21	SE	TIPNET
193.45-47	p	resvd	SE	TIPNET
193.48	p	143	FR	RENATER
193.49	p	79	FR	RENATER
193.50	p	120	FR	RENATER
193.51-52	p	resvd	FR	RENATER
193.53	n	55	BE	NCC non-provider (dup)
193.54-55	?	free	none	NCC
193.56	n	1	FR	non-provider FR NIC
193.57	n	resvd	FR	non-provider FR NIC
193.58	n	5	BE	NCC non-provider
193.59	p	17	PL	academic
193.60	p	137	UK	JANET
193.61	p	13	UK	JANET
193.62	p	0	UK	JANET
193.63	p	18	UK	JANET
193.64	p	23	FI	EUnet/FI
193.65-67	p	resvd	FI	EUnet/FI
193.68	p	0	BG	EUnet/BG
193.69	p	resvd	IS	EUnet/IS
193.70	p	resvd	IT	EUnet/IT

Block	p / n	nets assigned	Country	Registry
193.71	p	0	NO	EUnet/NO
193.72	p	18	CH	EUnet/CH
193.73	p	resvd	CH	EUnet/CH
193.74	p	5	BE	EUnet/BE
193.75	p	resvd	BE	EUnet/BE
193.76-77	p	resvd	HR	EUnet/HR
193.78	p	30	NL	EUnet/NL
193.79	p	resvd	NL	EUnet/NL
193.80	p	21	AT	EUnet/AT
193.81-83	p	resvd	AT	EUnet/AT
193.84	p	86	CS	EUnet/CS
193.85-86	p	resvd	CS	EUnet/CS
193.87	p	24	CS	EUnet/CS for SANET
193.88	p	28	DK	EUnet/DK
193.89-91	p	resvd	DK	EUnet/DK
193.92	p	11	GR	EUnet/GR
193.93	p	resvd	GR	EUnet/GR
193.94	p	5	TN	NCC EUnet/TN
193.95	p	resvd	TN	EUnet/TN
193.96	p	124	DE	EUnet/DE
193.97	p	127	DE	EUnet/DE
193.98	p	0	DE	EUnet/DE
193.99-103	p	resvd	DE	EUnet/DE
193.104	p	11	FR	EUnet/FR
193.105-111	p	resvd	FR	EUnet/FR
193.112	p	28	UK	EUnet/UK
193.113	p	67	UK	EUnet/UK (special)
193.114-119	p	resvd	UK	EUnet/UK
193.120	p	17	IE	EUnet/IE
193.121-123	p	resvd	IE	EUnet/IE
193.124	p	42	RU	EUnet/RU + xSU
193.125	p	resvd	RU	EUnet/RU + xSU
193.126	p	32	PT	EUnet/PT
193.127	p	0	ES	EUnet/ES
193.128	p	69	UK	PIPEX

Block	p / n	nets assigned	Country	Registry
193.129-135	p	resvd	UK	PIPEX
193.136	p	35	PT	RCCN
193.137	p	resvd	PT	RCCN
193.138	?	5	SI	NCC general
193.139	p	254	FR	Individual Block allocation
193.140	?	14	TR	NCC general
193.141	p	0	DE	XLINK + reserved
193.142	n	64	FI	NCC non-provider
193.143	n	0	FI	NCC non-provider
193.144	p	10	ES	RedIRIS
193.145-147	p	resvd	ES	RedIRIS
193.148	n	11	ES	non-provider ES NIC
193.149-155	n	resvd	ES	non-provider ES NIC
193.156	p	43	NO	UNINETT
193.157-159	p	resvd	NO	UNINETT
193.160	n	68	NO	non-provider NO NIC
193.161	n	resvd	NO	non-provider NO NIC
193.162	n	21	DK	non-provider DK NIC
193.163	n	resvd	DK	non-provider DK NIC
193.164	n	3	PL	NCC non-provider
193.165	n	resvd	PL	non-provider
193.166	p	6	FI	FUNET
193.167	p	resvd	FI	FUNET
193.168	n	41	LU	NCC non provider
193.169	p	0	UK	AT&T Istel
193.170	p	26	AT	NCC ACONET
193.171	p	resvd	AT	ACONET
193.172	p	4	EU	NCC EMPB
193.173	p	resvd	EU	EMPB
193.174	p	0	DE	DFN
193.175	p	resvd	DE	DFN
193.176	n	17	NL	non provider NL NIC
193.177	n	resvd	NL	non provider NL NIC
193.178	n	30	IE	NCC non provider IE
193.179	n	resvd	IE	non provider IE

Block	p / n	nets assigned	Country	Registry
193.180	n	113	SE	non provider SE NIC
193.181-183	n	resvd	SE	non provider SE NIC
193.184	p	0	FI	Helsinki Telephone Company
193.185	p	resvd	FI	Helsinki Telephone Company
193.186	n	30	AT	non provider AT NIC
193.187	n	resvd	AT	non provider AT NIC
193.188	n	3	several	NCC Middle East
193.189	n	64	NG	NCC Nigeria
193.190	p	0	BE	Belgian National Research Net
193.191	p	resvd	BE	Belgian National Research Net
193.192-243	?	free	none	NCC
193.244	p	255	BE	Kredietbank
193.245	p	255	BE	Kredietbank
193.246-247	p	resvd	BE	Kredietbank
193.248-254	p	1530	FR	France Telecom Internal Network
193.255	?	free	none	NCC

Appendix D

Domain Table

This appendix gives an overview of all top level domains, and other categories mentioned in the tables and graphs.

Domain	Specifying
IXI	IXI
IIS	the Interactive Information Server
LOCAL	the NCC itself using IP
NCC-X25	the NCC itself using X.25
PSPDN	the Public Data Network
UNKNOWN	no mapping between IP address and domain name could be found
com	commercial organisations (mainly in the US)
edu	educational organisations (mainly in the US)
gov	US government organisations
mil	US military organisations
net	network providers and related organisations
org	organisations (mainly in the US)
al	Albania
at	Austria
au	Australia
be	Belgium
br	Brazil
bg	Bulgaria
by	Byelorus
ca	Canada
ch	Switzerland
cl	Chile
cs	Czechoslovakia
de	Germany
dk	Denmark
dz	Algeria
ee	Estonia

Domain	Specifying
es	Spain
fi	Finland
fr	France
gb	Great-Britain
gr	Greece
hk	Hong Kong
hr	Croatia
hu	Hungary
ie	Ireland
in	India
is	Iceland
it	Italy
il	Israel
jp	Japan
kr	Korea
lt	Lithuania
lu	Luxembourg
lv	Latvia
mx	Mexico
nl	Netherlands
no	Norway
nz	New Zealand
pl	Poland
pt	Portugal
ro	Romania
se	Sweden
sg	Singapore
si	Slovenia
su	USSR
tn	Tunesia
tw	Taiwan
ua	Ukraine
uk	United Kingdom
us	United States
va	Vatican City State
yu	Yugoslavia
za	South Africa

Appendix F

Working Group Mailing Lists

Coordinating and support for the activities of the Working Groups is a key focus for the RIPE NCC. During the first quarter, the NCC has created mailing lists for those working groups that have requested this facility.

Relationship between Academic & Research Networks & Commercial Networks.
Chair: Glenn Kowack. E-mail: `glenn@eu.net`.
Working Group E-mail: `raec-wg@ripe.net`.

Network Information Discovery and User Support.
Chair: Nandor Horvath. E-mail: `horvath@sztaki.hu`
Working Group E-mail: `nidus-wg@ripe.net`

DNS Issues
Chair: Francis Dupont. E-mail: `francis.dupont@inria.fr`
Working Group E-mail: `dns-wg@ripe.net`

Routing Issues
Chair: Jean-Michel Jouanigot. E-mail: `jimi@dxcoms.cern.ch`
Working Group E-mail: `routing-wg@ripe.net`

Network Monitoring and Statistics Gathering
Chair: Bernhard Stockman. E-mail: `boss@sunet.se`

Network Maps
Chair: Daniele Bovio. E-mail: `hi@frors12.bitnet`
Working Group E-mail: `maps-wg@ripe.net`

European Connectivity
Chair: Milan Sterba. E-mail: `milan.sterba@inria.fr`

RIPE Database
Chair: Wilfried Woeber. E-mail: `woeber@access.can.ac.at`
Working Group E-mail: `db-wg@ripe.net`

Local Internet Registries
Chair: Daniel Karrenberg. E-mail: `dfk@ripe.net`

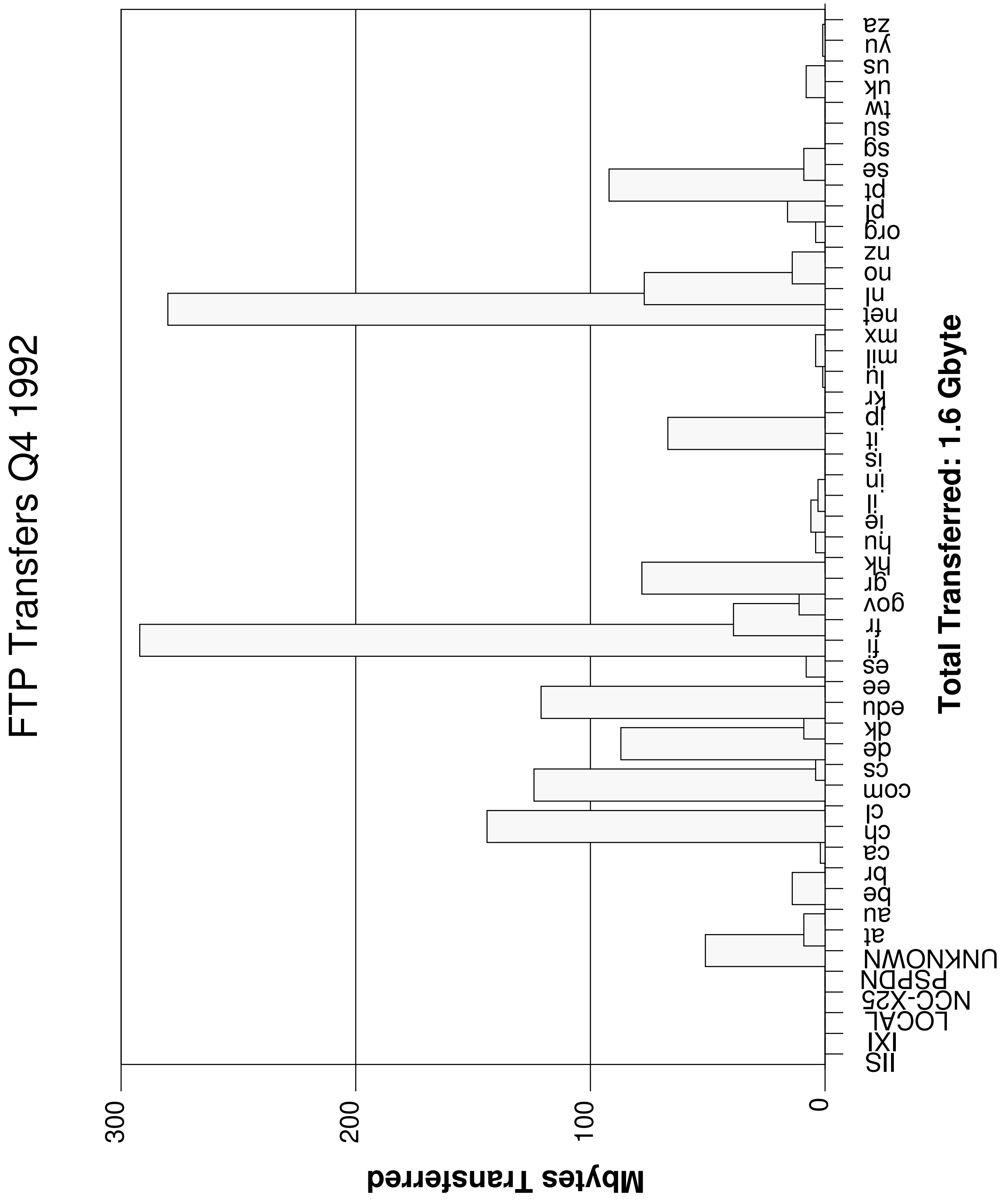
Working Group E-mail: `local-ir@ripe.net`

To subscribe to any working group send a message to:

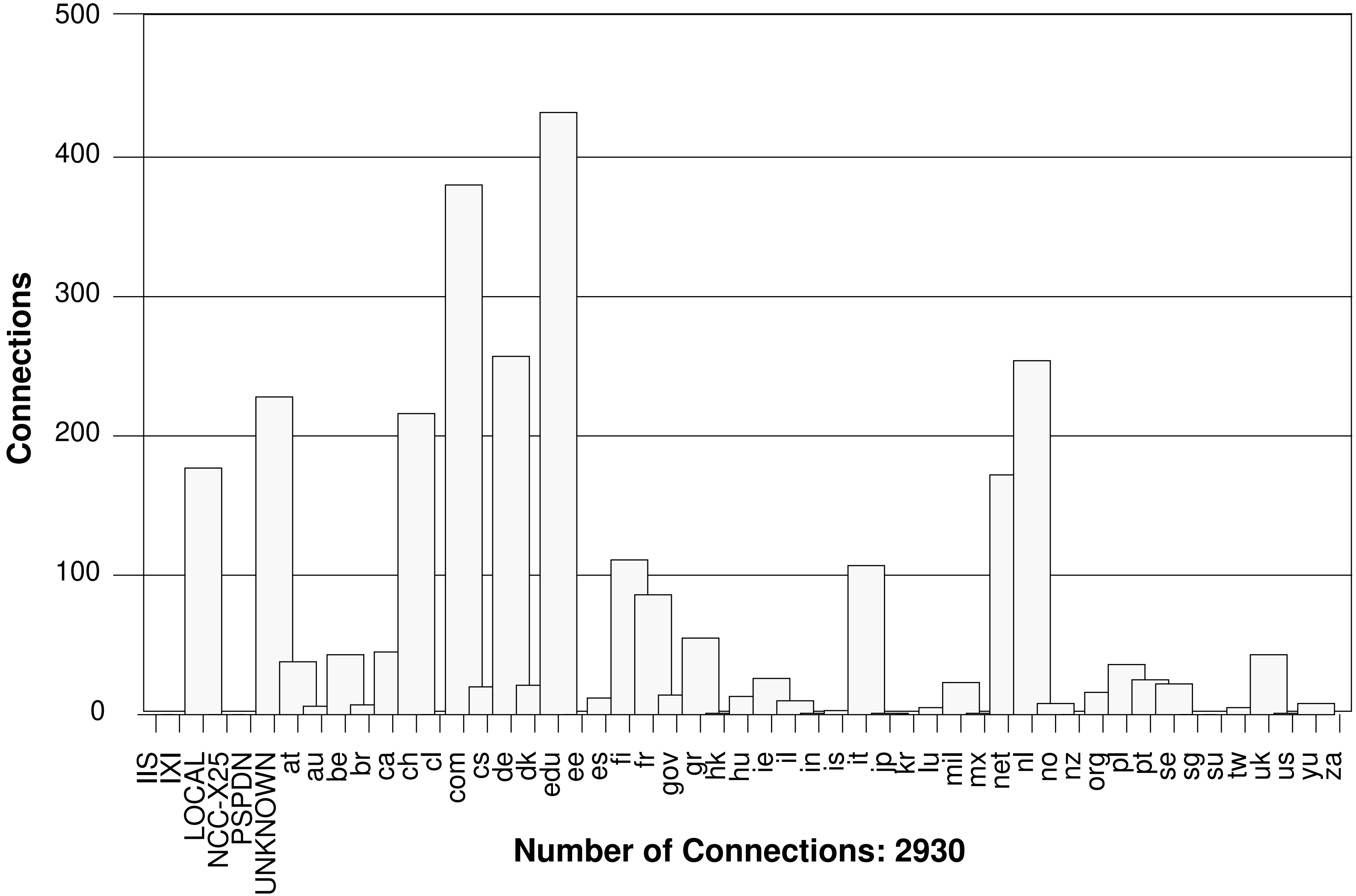
`[listname]-request@ripe.net`

where [listname] is replaced by the name of one of the working groups specified above.

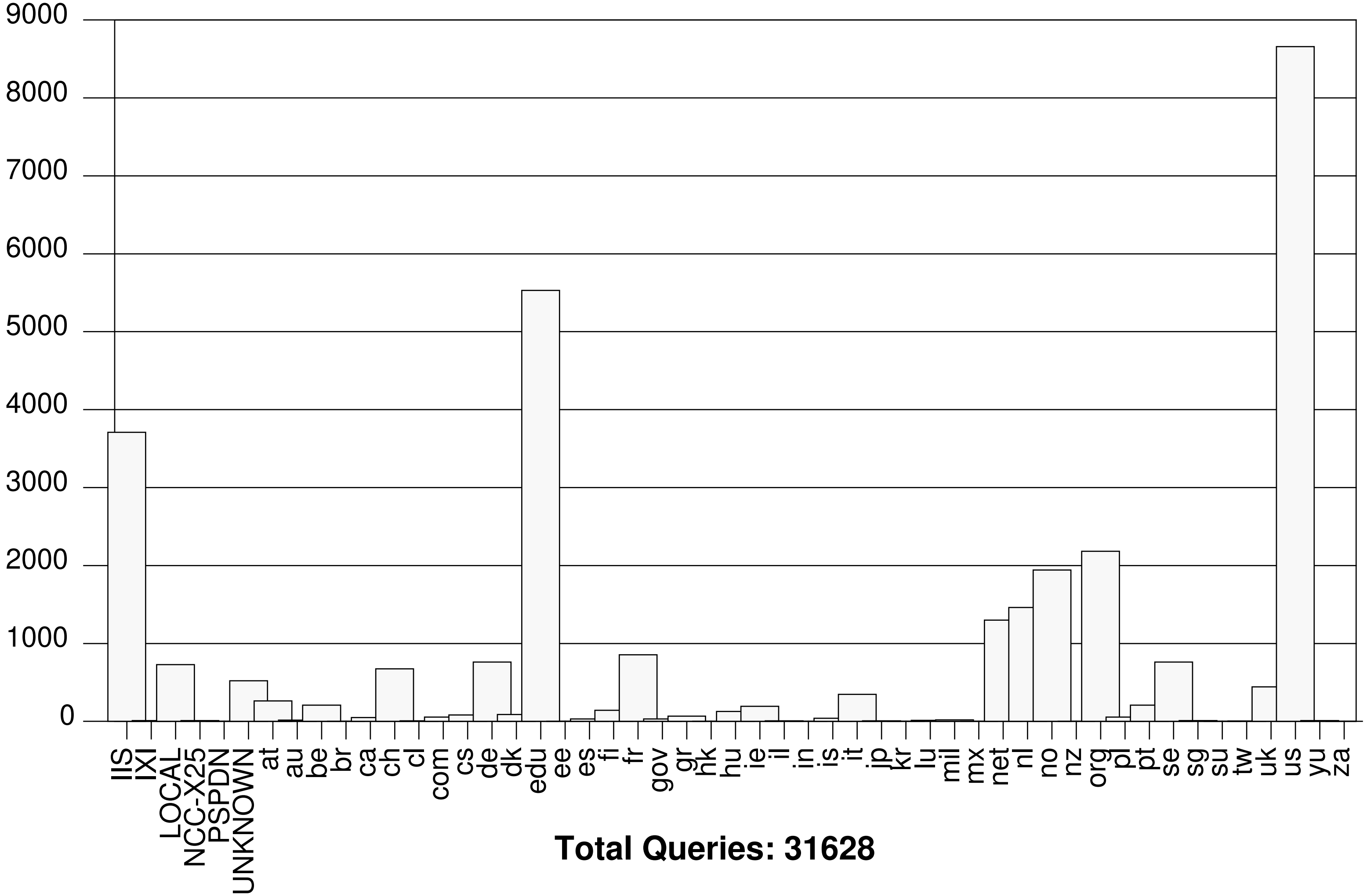
Appendix G


FTP Transfers Q4 1992
Total Transferred: 1.6 Gbyte
Mbytes Transferred
0
100
200
300
IIS
IXI
LOCAL
NCC-X25
PSPDN
UNKNOWN
at
au
be
br
ca
ch
cl
com
cs
de
dk
edu
ee
es
fi
fr
gov
gr
hk
hu
ie
il
in
is
it
jp
kr
lu
mil
mx
net
nl
no
nz
org
pl
pt
se
sg
su
tw
uk
us
yu
za

FTP Connections Q4 1992

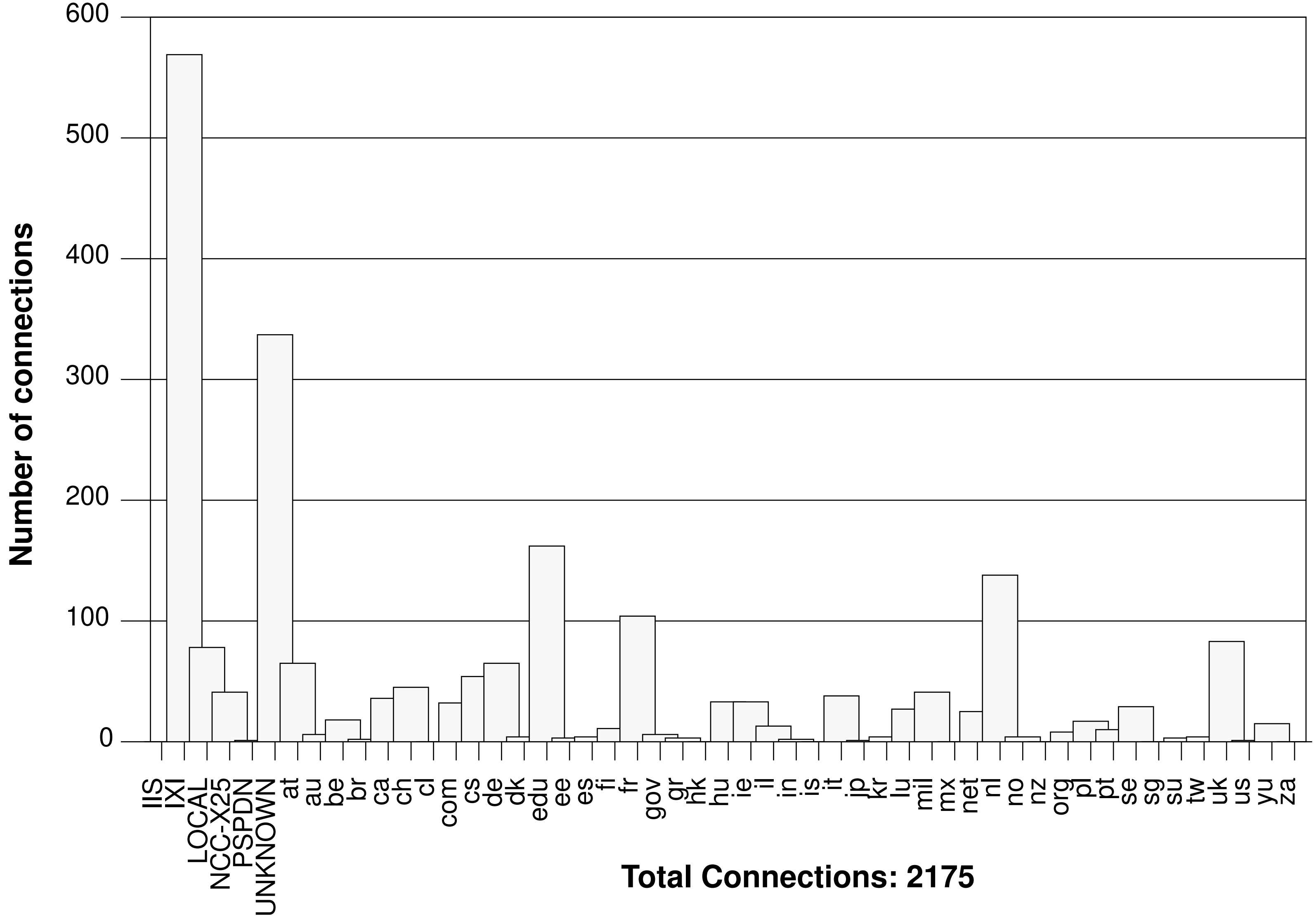


RIPE Database Queries Q4 1992



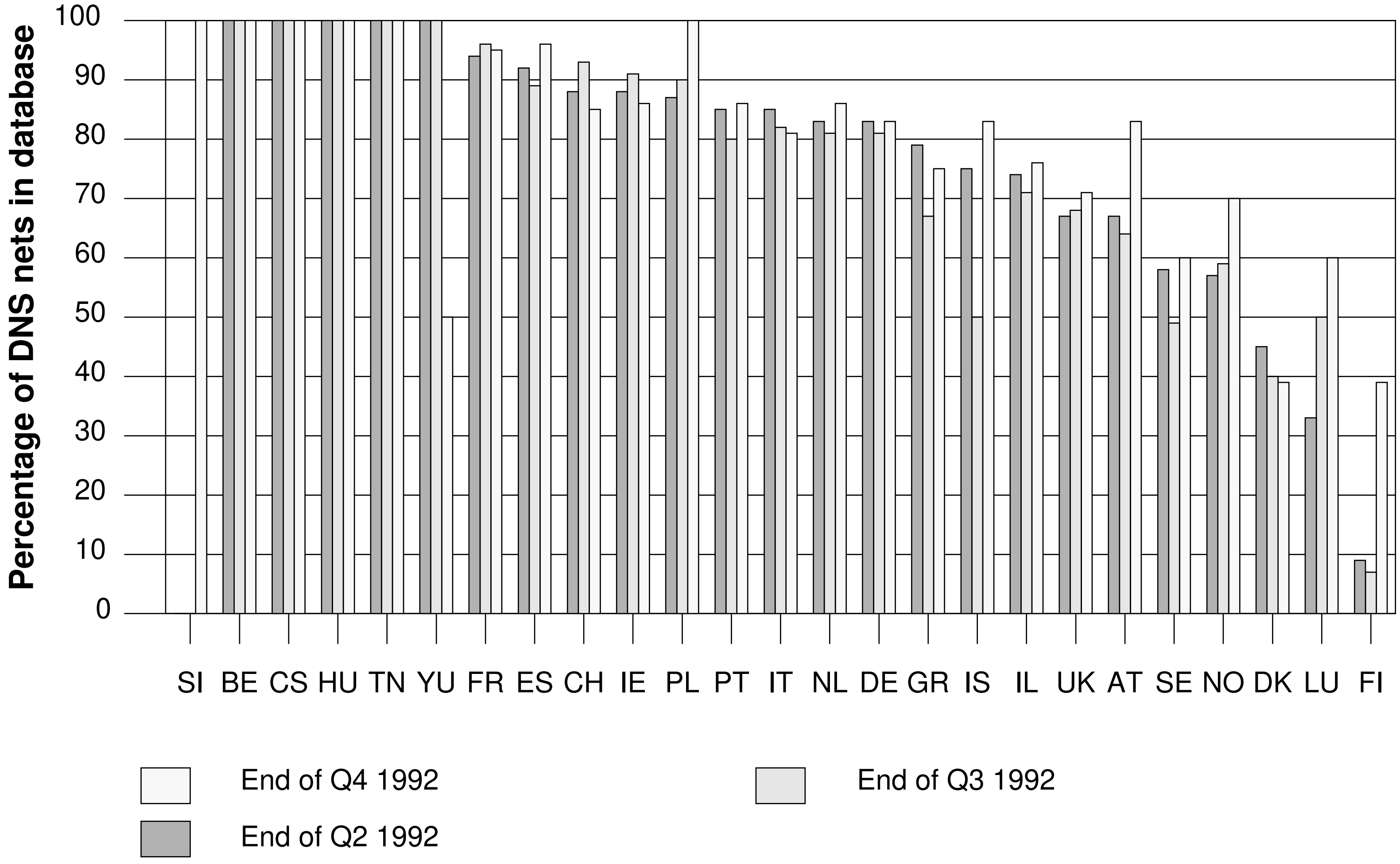
Total Queries: 31628

Interactive Information Server Usage Q4 1992



Total Connections: 2175

Networks in DNS Registered in RIPE Database 1992



RIPE DNS Hostcount per Country, December 1992