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E-mail Contacts Throughout Europe

Document prepared by
Maria Dimou / CERN

A LIST OF INTERNET CONNECTIVITY SERVICE PROVIDERS

NB! The following list contains ONLY those who answered in a call that lasted for 2,5 months.
The list was compiled by Maria Dimou-Zacharova
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----- AUSTRIA -----

Network Name: EUnet-Austria
Service Area: Austria
Contact: EUnet support
Dr. Michael Haberler
Voice: +43 1 3174969
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email: office@eunet.co.at
FTP more info: eunet.co.at:~ftp/pub/EUnet/EUnet-Austria

Network Description (short paragraph):

EUnet Austria is part of EUnet system and provides Internet connectivity and Frame Relay service through a wide range of access options. EUnet Austria is open to any institution interested in open networking without limitations on traffic types. Access is possible via the EUnet Point-of-Presence network (active POPs in Vienna, Linz, Graz and Salzburg, with four more POP's planned for 1994) through leased lines, DialupIP and UUCP mail and news service via modems, ISDN and the public X.25 network Datex-P.

EUnet Austria Services and prices Overview

EUnetLink Electronic Mail:

Hookup via uucp, Trailblazers and V32.bis Modems available. The subscriber sites are registered in the Internet Domain Name service with MX records for best reachability.

one-time installation fee: AS 500.-
Subscription: AS 600.- p.m.
volume based charges: Austria AS 0,30 per KByte and recipient
Europe AS 1,30 per KByte and recipient
other countries AS 3,50 per KByte and recipient
Volume charges are for SENT mail only.

EUnetLink News:

one-time installation fee: AS 1000.-
Subscription: AS 600.- p.m.
Connect time: AS 0,50 per minute, altogether not more than AS 1.500,-

DialeUnet InterEUnet DialupIP

This includes a full news feed, email backup, Domain name registration and full Internet connectivity for one IP address handed out by us.

V.32 bis, ISDN, or X.25 access

Installation: AS 1500.-
monthly charge: AS 3500.- for modem dialup, AS 3700.- for ISDN and X.25 access.
The monthly fee includes a volume of 20MB during the day and 30MB during off-peak times. Above this volume the following charges apply:

Volume charges
AS/MB 7-19 Uhr: AS 200,-
AS/MB 19-7 Uhr: AS 150,-

Volume charges do not apply for traffic between EUnet Austria subscriber sites, and mail, news and DNS traffic.

We recommend using Morning Star PPP for Unix machines. We can provide MST PPP for many platforms for AS 6.300.- to our subscribers. For best result we recommend using ZyXel modems, which allow about 1.6KB/s transfer rate for compressed files and more than 3KB/s for text files (provided your host serial

ports supports hardware flow control and sustained data rates of at least 38400 Baud).

InterEUnet - Leased Line Internet connections:

LL connections are flat-rate and also include a full news feed, email backup service, Domain name registration and full Internet connectivity for a Class C IP network address registered by us. Connections are either synchronous/PPP or Cisco HDLC or async (PPP, SLIP with VJ compression).

one-time installation fee:

This includes provisioning of router port, leased line to customer if within 5km of a EUnet Austria POP, line provisioning, configuration. For other locations please request a special offer from us.

Synchronous port on Cisco: AS 45.000.-
 Async SLIP or PPP: AS 12.000.-

Monthly charge:

9600 Baud (async & sync): AS 11.500.-
 19200 Baud (async & sync): AS 14.500.-
 64KB (sync only): AS 27.500.-

PersonaleUnet Single User IP Service

This service is intended for persons wanting casual access to the Internet with TCP/IP but without the need to connect a fully-routed network and receiving mail or news.

Access is via V.32bis, ISDN and public X.25; SLIP/PPP/IP-over-X.25 (RFC877).

Installation: AS 600.-
 Monthly charge: AS 950.- (includes 2 hours connect time for V.32bis or 1 hour for ISDN)
 Connect-Time charges: AS 3.-/min (7-19h), AS 1.50.- (19-7h) for V.32bis
 AS 5.-/min (7-19h), AS 2.00.- (19-7h) for ISDN

Mail access is via POP2/POP3 or IMAP on our server. News can be read via NNTP.

EUnet Austria Points of Presence:

locations: available as of:

Vienna	now
Salzburg	now
Linz	11/93
Graz	11/93
Klagenfurt	1/94
Goetzis	3/94

Michael Haberler
 EUnet Austria Ltd
 A-1010 Vienna, Austria, Schottenring 33
 Tel: +43 (1) 3174969

mah@eunet.co.at

fax: +43 (1) 3104462

-----CROATIA-----

CARNet is providing Internet access free of charge for the people of the press. Full services are offered but current international connectivity is 9.6 kbps only. Thus multimedia applications are limited. Upgrade to 64kbps is underway. Contact:

Helpdesk
 Sveuciliski racunski centar SRCE
 J. Marohnica bb
 41000 Zagreb
 Croatia

helpdesk@carnet.hr
 phone: +385 41 510 03

Predrag Pale
the director of CARNet

-----**DENMARK**-----

As requested, we send you information regarding connectivity to the Internet from Denmark

Service provider:
UNI-C,
The Danish Computing Centre for Research and Education

Address:
Vermundsgade 5
DK 2100 Copenhagen O
Denmark

Services offered:
"UNI-C Internet Service" offers:
- Electronic mail
- Gopher information server
- Search gopherspace for titles (Veronica)
- Find files in public archives (Archie)
- ftp
- telnet
- USENET (NetNews)
- Personal file area
- Hints and news regarding resources on the Internet

Charges:
For connection via modem:

Per year flat rate : 1800 DKR (+VAT).
More than 4 usernames at same site: 900 DKR
More than 21 usernames at same site: 700 DKR

For connection via DEnet:

Per year flat rate : 900 DKR
More than 4 usernames at same site: 450 DKR
More than 21 usernames at same site: 350 DKR

-----**FRANCE**-----

Fnet Services
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Fnet Association offer consists of five service classes:

- plain e-mail;
- InterEUnet;
- Dialup-IP;
- Usenet news;
- Utopia, a mailboxes and login service.

A. Basic Service : E-mail
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Plain e-mail is the basic service; it may be accessed by UUCP (dial line and modem, or Transpac, the French PSDN) or by TCP-IP (leased line or Transpac)

I Initial charges (to be paid only on first year)

- Basic Services opening : 1 000 FRF

In case of leased line access (Transfix for instance), in addition :

Access point set-up charges (on first year) :

. 19,2 kbits/s (or less) line throughput:	2 000 FRF
. 64 kbits/s line throughput:	3 000 FRF
. more than 64 kbits line throughput:	4 000 FRF

II Fixed charges (per year)

- Basic Services subscription:	4 000 FRF / year
- Discount rate: University, Public Organizations, Non-for-profit Organizations, individual users:	1 500 FRF / year

In case of leased line access (Transfix for instance), in addition :

Access point charges :

. 19,2 kbits/s (or less) line throughput:	3 000 FRF / year
. 64 kbits/s line throughput:	6 000 FRF / year
. more than 64 kbits line throughput:	10 000 FRF/ year

III Quantities dependent charges

1. Connect time charges:

- For Dialup or Transpac access:	5 FRF / hour
- For leased line access:	n/a

2. Per-mail (sent or received) charges:

. 5 kbytes (or less):	0,20 FRF / message
. 100 kbytes (or less):	0,40 FRF / message
. more than 100 kbytes:	0,80 FRF / message

Charges decrease with quantity:

. 10 001 to 25 000 messages per year:	25 % discount
. 25 001 to 100 000 messages per year:	40 % discount
. more than 100 000 messages per year:	50 % discount

3. Volume charges:

. France domestic mail:	free of charge
. from or to Europe, outside France:	400 FRF / mega-byte
. outside Europe :	800 FRF / mega-byte

Charges decrease with quantity:

. from 20 to 34 megabytes per year :	discount: 30 %
. from 34 to 54 megabytes per year :	discount: 50 %
. from 54 to 82 megabytes per year :	discount: 60 %
. from 82 to 122 megabytes per year :	discount: 75 %
. more than 122 megabytes per year :	discount: 82,5 %

B. InterEUnet Service

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InterEUnet services may be accessed by leased line or by Transpac, the French public PSDN.

I Initial charges (to be paid only on first year)

- Basic Service opening (only for new subscribers):	1 000 FRF
- InterEUnet Service opening:	2 500 FRF

In case of leased line access (Transfix for instance), in addition :

Access point set-up charges (on first year) :

. 19,2 kbits/s (or less) line throughput:	2 000 FRF
. 64 kbits/s line throughput:	3 000 FRF
. more than 64 kbits line throughput:	4 000 FRF

II Fixed charges (per year)

- InterEUnet Service subscription: 16 000 FRF / year
- Discount rate: University, Public Organizations, Non-for-profit Organizations, individual users: 13 500 FRF / year

In case of leased line access (Transfix for instance), in addition :

Access point charges :

- . 19,2 kbits/s (or less) line throughput: 3 000 FRF / year
- . 64 kbits/s line throughput: 6 000 FRF / year
- . more than 64 kbits line throughput: 10 000 FRF / year

III Quantities dependent charges

InterEUnet fees depend on volume subscription

Monthly volume subscription Maximum volume allowed

No subscription

Monthly subscription	150 F	1 Mb/month
-	750 F	10 Mb/month
-	1 000 F	20 Mb/month
-	2 000 F	100 Mb/month
-	5 000 F	500 Mb/month

More than 10 000 F : just ask us.

C. Dialup-IP Service

Dialup-IP is a full Internet access service available on dialup lines with modems.

I Initial charges (to be paid only on first year)

- Basic Service opening (only for new subscribers): 1 000 FRF
- Dialup-IP Service opening: 2 500 FRF

II Fixed charges (per year)

- Dialup-IP Service subscription: 8 000 FRF / year
- Discount rate: University, Public Organizations, Non-for-profit Organizations, individual users: 5 500 FRF / year

III Quantities dependent charges

1. Connect time charges: 5 FRF / hour
2. Volume charges:
 - . France domestic traffic: free of charge
 - . international traffic: 400 FRF / mega-byte

D. Usenet news

To subscribe to the Usenet news service, you must be already a subscriber of another Fnet service.

I Initial charges (to be paid only on first year)

- News Service opening: 1 000 FRF

II Fixed charges (per year)

- News Service subscription: 5 000 FRF / year

including 1 million news (in case of leased line or InterEUnet access) or 600 hours of connect time (in case of dialup or Transpac access).

III Quantities dependent charges

Dialup or Transpac access: 5 FRF / hour
InterEUnet or leased line access: 3 000 F / 1 million news

E. Utopia Service

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Utopia Services are aimed toward individuals or little business looking for an Internet/Fnet access, without to have to manage a full connexion. In order to offer such a capability, Fnet Association has set up a server with suitable software.

Utopia offers two levels of service:

- * basic world-wide e-mail service;
- * extended services, with features such as:
 - more efficient e-mail management with a POP server suitable for using software like Eudora, allowing off-line downloading of mailbox content;
 - Usenet news;
 - telnet connexion all over the Internet;
 - ftp file transfer;
 - kermit for file transfer between server and user's computer.

Login into Utopia

With a terminal (as plain as a VT100) or your computer with a modem (V22, V22bis, V32, V32bis) you dial :

+33 (1) 39 63 52 54

Access device will ask you: "host:", your answer will be: "utopia" (lower case).

With a "Minitel 1b" you may dial 3621 and type Transpac service number:

17827026961

This Transpac number may also be used with a modem, when dialing 36 06 24 24.

From an Internet connected computer you may use telnet:

telnet utopia.fnet.fr

To register to Utopia

As Utopia prompts you for login, you may answer "nouveau", it is the special electronic registration account. The registration program will proceed and ask you for needed information (first and last name, address, phone number).

To get a login name and an e-mail address

Utopia will suggest a login name to you, but you will be able to modify it. This identifier will not be known in the outside world.

The system will suggest to you an e-mail name, the name under which you will be known to your correspondents. In general it will be of the form "First-name.Last-name" (like John.Martin), but you may change it. By simply typing a carriage return, you will accept the system suggestion.

To use Utopia

After electronic registration, Utopia will tell you how much money you have to send to Fnet Association for completion, and you will receive useful information by mail (for registrations

initiated from abroad, another procedure may be allowed, without mail and by coming in our premises when in Paris. For other needs, ask us).

Utopia : basic services

With Utopia Basic Services you'll be only allowed to use electronic mail. It will give to you worldwide access to all Fnet users, all users of the European sister networks (EUnet), all Internet users, as to networks accessibles by gateways (Bitnet, SPAN, HEPNET, etc ..).

Utopia is set up on an Unix server, with (among others) the e-mail software elm and the emacs editor.

Utopia basic services fees : 20 FRF/connect hour (23.72 with taxes).

Minimum subscription : 10 hours/month, payables in advance (see below).

Utopia : extended services

With Utopia extended services you get access to "the whole Internet" with power tools:

- + POP e-mail server : POP allows you to batch-process your mail if you have a micro-computer (Mac or PC) and a software like Eudora.
Eudora dials in the server, establishes the connection, put the contents of your mailbox on your hard disk and hangs up. You read it later, off-line. It is very cost-effective in terms of phone bill (in France local calls are to be payed on an one-by-one basis) and connect time.
- + telnet : if you have accounts on computers all over the world, you may access them from Utopia.
- + ftp : file transfer protocol toward and from computers where you may have accounts and from public access servers ("anonymous ftp").
- + Usenet news
- + Kermit

Utopia extended services fees : 40 FRF/connect hour (47.44 with taxes).

Minimum subscription : 5 hours/month, payables in advance (see below).

How to choose between basic services and extended services?

When you log into Utopia, the server requires you to choose between extended services (E like "services evolues") and basic services (B like "services de base"): how to choose?

- if you have just an ascii terminal (or emulator) and you want to read your mail when logged, choose B like basic services, you will pay less (the halfth).
- when using Eudora, or if you will use telnet or ftp, you need E like "advanced services".

Price list

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The Eudora subscription works with 200 F (237.20 with taxes) "slices". Each slice opens 10 hours of basic services connexion, or 5 hours of advanced services, or a mixture of both of them, and 1 megabyte of mail and ftp traffic. Each month costs at least one slice, the extra slices are allowed to overlap the month boundaries.

The first month of the subscription is due as a whole, even when starting after the beginning of the month. The suscriber is allowed to have a subscription starting at the beginning of a month.

An initial set-up fee of FF 100 (118.6 with taxes) is to be payed at opening time.

The address of Fnet Association : 11 rue Carnot,
94270 Le Kremlin Bicetre (a suburb city very close to Paris).
e-mail for general information: contact@fnet.fr
Phone: +33 (1) 45 21 02 04. Fax: +33 (1) 46 58 94 20.

Humberto Lucas E-mail: Humberto.Lucas@fnet.fr
President de FNET Tel: +33 1 45 21 02 04 Fax: +33 1 46 58 94 20

-----GERMANY (Eunet)-----

Since 1985, EUnet/Germany is offering professional networking services. Back in 1989 EUnet was among the first service providers in Germany offering full Internet connectivity.

Today, the EUnet services cover a broad range from low-cost small-volume up to connectivity via dedicated leased lines.

Tariffs are made in a manner that allows low-cost entry and gracious upgrade in services, we believe that this caters for the needs of any organisation.

Connections to the German EUnet backbone can be via UUCP over dial-up phone lines or X.25 PDN, TCP/IP over X.25 PDN (Datex-P and the R&D WiN) or over ISDN and over leased lines.

The German PTT charges for use of their communication infrastructure roughly as follows: DM 0.23 per 30 seconds phone or ISDN, about DM 50/MB data over Datex-P and about DM 4500/month for a 64 kbit/s leased line inside Germany (from Munich to Dortmund for example).

EUnet services and tariffs (prices in DM/month, US\$1~DM1.50 as of 921105) are:

- Base fee DM 75/month
- Mail DM 35/month subscription, additional volume charges for international mail apply. Volume contingents can be booked in advance. This will lower the price for international traffic.
- Newssubscription DM 90/month up to 100% of the carried newsgroups.
- Internet DM 330/month subscription, additional volume charges for international traffic apply. Volume contingents can be booked in advance. This will lower the price for international traffic substantially. Without booked contingents, international traffic will be charged at DM 0.05/kB incoming and outgoing.

There are special tariffs for dedicated access via leased line or phone.

Information (in German only) is available as compressed PostScript from ftp.Germany.EU.net:~ftp/pub/EUnet/tarife/

tarife.ps.Z	tariffs
leistung.ps.Z	description of services and tariffs
agb.ps.Z	business conditions

This documentation can also be snail-mailed to you. Please provide us with a postal address to do so.

If you have further questions, please contact Postmaster@Germany.EU.net (+49 231 972 2222, operated on weekdays 9:00-12:00 and 13:00-17:00 GMT+1, answering machine otherwise). Our team will be pleased to assist you.

Andreas Schachtner
afs@Germany.EU.net

-----GERMANY (SubNet e.V.)-----

Verein zur Foerderung der privat betriebenen Datenkommunikation e.V.
(SubNet e.V.)
c/o Heiko Rupp
Gerwigstr. 5
D-76131 Karlsruhe

E-Mail: info@subnet.sub.net
Phone: +49 721 9661521
FAX: n/a

The SubNet e.V. and its members operate computer systems all over Germany that provide EMail and USENet News under a shared cost model. People can become members in the SubNet e.V. and pay

membership fees: 60 DM (30 ECU) per year for students and other socially stressed groups, 120 DM (60 ECU) per year for personal memberships and 240 DM (120 ECU) for company memberships.

People do not need to become member of SubNet to use its services. They can dial into the local SubNet site and get their EMail/USENet News by paying the local site its (locally defined) fee, normally approx. 10 to 20 DM (5 to 10 ECU) per month. Depending on the cost situation, additional fees may be required for international email.

The advantage of the SubNet e.V. is its active members that try to help interested parties to get connected to the Net.

For more information contact info@subnet.sub.net.

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Kurt Jaeger, Schozacher Str. 40, D-70437 Stuttgart
EMail: pi@complx.stgt.sub.org
Tel. +49 711 8701309 (privat)
FAX +49 711 7189848

27 Years to go !

-----THE NETHERLANDS-----

NLnet
Kruislaan 413
1098 SJ Amsterdam
The Netherlands

Charges follow,

Regards,

Martijn Roos Lindgreen

The Stichting NLnet was founded by the NLUUG (the Dutch Unix User Group) to provide networking service to its members. A "stichting" is a common legal construct in The Netherlands for a non-profit organisation.

NLnet currently has about 350 subscribers. Our subscribers are mainly organisations (ranging from small to large organisations), but NLnet also connects an increasing number of individuals.

The NLnet backbone consists of a Sun 4/670, a Sun IPX and a Sun SLC, a cisco router (AGS), an Annex-III terminalserver and two modembanks, one equipped with PEP, the other with V.32bis modems. The NLnet backbone is housed at CWI, Amsterdam.

The NLnet prices are based on 4 kinds of connections:

1. Dial-up connection without interactive connectivity outside the NLnet backbone (i.e. only mail, news, archive, etc service).
2. InterEUnet with a dial-up connection.
3. InterEUnet with a permanent connection.
4. A login service (from the 15th of July 1993 on)

For 1, NLnet maintains a low entry cost, and bills additionally for a news subscription, outgoing mail, and connect time exceeding a monthly limit. For outgoing mail, the price per KB decreases strongly when much mail is sent. Usually the subscriber connects via UUCP, but Dial-Up SLIP/PPP is also possible. There is no charge on incoming mail, or on news or archive service traffic. There is also an automatic FTP service available without charge.

For 2, NLnet provides a registered IP-number with international access, and NLnet uses a fixed price, based upon subscribed usage of non-NLnet infrastructure. Mail, news, archive service, etc is included. In addition to the fixed price NLnet bills for non-NLnet traffic that exceeds the subscribed to amount and for excessive connect-time. Connection is via SLIP or PPP, but running UUCP (f.i. over TCP/IP) additionally to receive queued mail and compressed news batches is possible (and recommended) without charge.

For 3, NLnet also uses fixed prices for subscribed usage of non-NLnet infrastructure. In addition NLnet bills for non-NLnet traffic that exceeds the subscribed amount. To keep the price as low as possible, NLnet leaves the responsibility for the connection to

the NLnet router (for a cisco-cisco connection) or terminalserver (for SLIP/PPP) up to the subscriber and only charge an initial entry fee for the use of a port on the NLnet router. The subscriber is expected to receive and deliver mail via SMTP if possible. News is usually provided via NNTP. NLnet further provides secondary name service, etc.

For 4, NLnet offers a personal login on one of the NLnet machines. This account can be used for individuals who'd like to explore the Internet using a full-blown Internet connection. NLnet bills a fixed amount per month and connect time.

For 1993 NLnet has the following prices (without VAT, the prices in NLG are correct, the approximate values in XEU and dollars are based on the exchange rate of NLG 1.00 = XEU 0.43 = \$ 0.58). These prices are valid for members of the NLUUG until December 1993. Non-members of the NLUUG need to add 10% to these prices.

Dial-Up connections without InterEUnet:

Standard subscription:	NLG	30,-	(XEU 13, \$ 18) per month
News subscription:	NLG	30,-	(XEU 13, \$ 18) per month
Outgoing mail within NL (less than	NLG	0,01	(XEU 0.004, \$ 0.006) per KB
within Europe (less than)	NLG	0,12	(XEU 0.05, \$ 0.07) per KB
outside Europe (less than)	NLG	0,16	(XEU 0.07, \$ 0.09) per KB
Connect time (over 20 h/month)	NLG	2,50	(XEU 1.08, \$ 1.47) per hour

Login service:

Login subscription (including Standard subscription):	NLG	60,-	(XEU 26, \$ 36) per month
Connect time (over 20 h/month)	NLG	2,50	(XEU 1.08, \$ 1.47) per hour

InterEUnet connections, one-time fees:

Dial-Up connection	NLG	0,-	
Leased-line with SLIP	NLG	1000,-	(XEU 434, \$ 588) one time
Leased line with cisco < 64 kbps	NLG	2000,-	(XEU 870, \$ 1176) one time
Leased line with cisco >= 64 kbps	NLG	4000,-	(XEU 1740, \$ 2352) one time

InterEUnet classes, based upon monthly traffic outside NLnet:

Less than 25 MB	NLG	200,-	(XEU 87, \$117) per month
Less than 100 MB	NLG	300,-	(XEU 130, \$176) per month
Less than 250 MB	NLG	500,-	(XEU 217, \$294) per month
Less than 500 MB	NLG	750,-	(XEU 326, \$441) per month
Less than 1000 MB	NLG	1250,-	(XEU 543, \$735) per month
Less than 2000 MB	NLG	2000,-	(XEU 870, \$1176) per month
Over 2000 MB per month	NLG	1,-	(XEU 0.43, \$0.58) per MB

Excess non-NLnet traffic	NLG	2,50	(XEU 1.08, \$1.47) per MB
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For connection-type 1, NLnet adjusts the outgoing mailprices according to the following formula:

$$\text{kb tariff} = \text{max.tariff} * 10000 * \ln (1 + \text{kb volume} / 10000)$$

The volume is the three month volume.

This means that for a large amount of mail the price per kB decreases very rapidly:

Volume	NL total	NL per kB	EU total	EU per kB	World total	World p kB
1 kb	0.01	0.010000	0.12	0.119994	0.16	0.159992
100 kb	1.00	0.009950	11.94	0.119404	15.92	0.159205
1000 kb	9.53	0.009531	114.37	0.114372	152.50	0.152496
2000 kb	18.23	0.009116	218.79	0.109393	291.71	0.145857
3000 kb	26.24	0.008745	314.84	0.104946	419.78	0.139928
4000 kb	33.65	0.008412	403.77	0.100942	538.36	0.134589
5000 kb	40.55	0.008109	486.56	0.097312	648.74	0.129749
10000 kb	69.31	0.006931	831.78	0.083178	1109.04	0.110904
20000 kb	109.86	0.005493	1318.33	0.065917	1757.78	0.087889
50000 kb	179.18	0.003584	2150.11	0.043002	2866.82	0.057336
100000 kb	239.79	0.002398	2877.47	0.028775	3836.63	0.038366

-----PORTUGAL-----

Services and Prices for 'EUnet - Portugal'

Background

EUnet Portugal is associated with EUnet Europe, a European consortium of 27 national internet network providers. It is the only pan-european internet

provider now that the E-Bone backbone is due to close shortly.

EUnet is a full member of the Internet providers organisation CIX, and provides full access to the Internet worldwide, through an extensive in-house network of european and trans-atlantic private circuits.

In Portugal, the EUnet Internet gateway provides the following services:

- Mail relaying to the Internet (MailLink service)
- USENET News distribution (News service).

At present, an individual or an corporate/institutional user must be a member of the PUUG (Portugal Unix Users Group) in order to access our services. This obligation will be dropped in the future.

- PUUG institutional member fee: \$US 200 / year
- PUUG individual member fee: \$US 80 / year

The user must establish a connection to the backbone system to access our services. (Individuals typically using PC, Mac, Unix, ... or the corporate's, usually an UNIX machine).

This connection may use regular PSTN telephone dial-up, or public X.25. The member pays all the communications costs from/to it's site up to the backbone machine as well as the fees detailed below.
Current dial-in access cities are Lisbon (and Porto very soon).

Both UUCP and TCP/IP protocols connections are supported.

The current fees for members network access are as follows:

Subscription fee: \$US 60 (\$US 20 individuals)
This is a one-time payment.

Monthly fees:

MailLink service : \$US 35 (\$US 20 individuals)
News distribution (200 groups): \$US 35 (\$US 20 individuals)
News distribution (all groups): \$US 180

Mail charges:

1Mb of national mail (sent by the user) costs approx. \$US 4
1Mb of international mail (sent or received by the user) costs approx. \$US 50
The national mail received by the user is free of charge.

An corporate connection allows mail and news access to all of its employees, provided that the organisation's gateway is managed for that purpose (relaying mail and news to all other machines).

Dial-in access supports both TeleBit PEP, and CCITT V22, V22bis, V32 and V32bis protocols.

We provide free access to our archive server, and some additional information services.

The users name is registered with the Portugal .pt server and the members domain is DNS managed. All the mail and site addressing is RFC822 style.

When a site connects, it receives a set of documentation on how to manage the mail and the news system, as well information on how to access services by mail (both within Portugal and worldwide).

The set-up of the connection on the user site is the user's responsibility.

However, we can arrange for the set-up of the connection, installation and configuration of the UUCP, sendmail and news sub-systems of the users gateway etc. This is an extra service which is charged appropriately. Please request a quotation for the level of assistance you require.

We monitor the network closely, and survey the user connections on a daily basis and provide FAX and phone hot-line service in case of trouble.

Prices shown are approximate and dependent on conversion rates.

Please contact info@Portugal.EU.net for latest prices, or more specific information.

EUnet Spain offers uucp email services, Internet News and InterEUnet IP connections, via dialup, public X.25 and leased line links.

EUnet also offers the possibility to acquire all necessary equipment for the connections and the on-site installation and configuration of the necessary SW and HW.

Regards

Juan Antonio Esteban

Prices of the EUnet services
(Email, News, Information Servers, IP) March 93

1. EUnet -- European UNIX Network

Fixed Charge

Affiliate Type	Charge
individual	3.000 pts/month
organization	5.000 pts/month

Organizations will receive an email domain for their exclusive use, what will allow them to manage an internal structure of departments, sections, workgroups, etc.

Individual affiliates will receive a virtual mailbox in the central machine of EUnet Spain. This mailbox will be connected to their particular machine.

2. E-mail

Initial one-time charge: 10.000 pts

By volume of traffic:

national	2 pts/Kbyte
european	12 pts/Kbyte
intercontinental	22 pts/Kbyte

NOTE: Pseudodomains .com, .edu, .mil and .org are considered as intercontinental.

The sender is charged for the messages, if possible. Otherwise, the receiver is charged.

The above charges assume that the node calls GOYA. In case GOYA were to initiate the call, there is a surcharge of 5ptas/Kbyte transferred in calls originated by GOYA.

3. News

Initial one-time charge: 10.000 pts
Fixed Charge: 4.000 pts/month

To have access to a volumen of news exceeding 5Mb/month you need a connection of at least 2400 bps.

To have access to a volumen of news exceeding 20Mb/month you need a connection of at least 9600 bps.

4. Info

Free of charge.

Accessible via:

e-mail	mail info.eunet.es
ftp	goya.eunet.es [193.127.1.2], anonymous, cd info/...
uucp	uucp goya!usr/spool/pub/info/...

5. FTPmail

Charged by traffic volume:

national	0 pts/Kbyte
european	5 pts/Kbyte
intercontinental	15 pts/Kbyte

6. InterEUnet

6.1.- Leased line

Bandwidth (nominal)	Initial (pts)	Charge (pts/month)
9600 bps	200.000	150.000
64 Kbps	350.000	250.000

6.2.- Dialup IP connections

We offer the SLIP and PPP protocols.
Two type of contracts are available: fixed charge or per volume.

Kind of connection	Initial (pts)	Charge (pts/month)
modem v.32	50.000	40.000
modem v.32 bis	50.000	60.000
x.25	30.000	40.000

Kind of connection	Initial (pts)	Fixed (pts/month)	Volume (pts/min)
modem v.32	7.000	7.000	35
modem v.32 bis	7.000	7.000	50

The v.32 norm accepts a theoretical maximum of 38.400 bps.
Usual figures are around 9 Kbps.

The v.32bis norm accepts a theoretical maximum of 57.600 bps.
Usual figures are around 14 Kbps.

6.3.- Dialup IP, private modem

Kind of connection	Initial (pts)	Charge (pts/month)
modem v.32	150.000	60.000
modem v.32 bis	150.000	90.000

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==== Connecting Europe since 1982 =====

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GOYA Servicios Telematicos
Clara del Rey, 8
E-28002 MADRID, Spain
tel: <madrid> 413 4856
fax: <madrid> 413 4901
<help@Spain.EU.net>

----- **SWEDEN** -----

SwipNet supply UUCP and Mailbox e-mail and Netnews service. The latter is a VT100 terminal accessible application, reachable by modem.

Price for both services is SEK 500 one-time and 200 per month plus 0.10 per connect minute. (6 per hour).

For Netnews, add another 200 per month.

VAT (25%) to be added. One USD equals SEK 8.

Info@swip.net

Olle Wallner
SwipNet AB
P.O.Box 62
S-164 94 KISTA
Sweden
Tel +46 8-6324040
Fax +46 8-6324200
wallner@swip.net

-----**SWITZERLAND**-----

SWITCH - Swiss Academic & Research Network

SWITCH Headoffice
 Limmatquai 138
 CH-8001 Zuerich

Tel: +41 1 268 1515
 Fax: +41 1 268 1568

SWITCH is a provider of Internet and other network services for all universities, other kind of schools and R&D institutions in Switzerland.

We operate a national multiprotocol network based on cisco routers, that currently serves 40 sites with 64 kbps ... 2 Mbps leased lines. In addition we offer dial-up network services (via modem V.32bis, or SwissNet ISDN) for small companies or single persons.

Value added services offered are:

- electronic mail (X.400, SMTP and UUCP support)
- Usenet News (UUCP or NNTP)
- Informations service including one of the most important file servers in Europe, i.e. nic.switch.ch
- Terminal access to libraries and other data base service providers
- electronic telephone directory, super computer centers etc.
- pilot directory service based on X.500

Pricing (all prices in sFr.):

Type of connection	charges/min	minimal charges / month
Interactive account	0.10	20.-
UUCP-connection	0.10	20.-
SLIP-connection (V.32 modem)	0.20	100.-
SLIP-connection (SwissNet ISDN)	0.30	200.-
Internet connection based on a leased line (64 kbps - 2 Mbps)		please ask for an offer

Electronic Mail

fixed charge per mail	0.15
plus: mail within SWITCH	0.05 / kByte
mail outside SWITCH	0.10 / kByte

The electronic mail volume is charged both ways kBytes sent plus kBtys received.

-----**UK (EUnet)**-----

EUnet GB
 Kent R&D Business Centre
 Giles Lane
 Canterbury
 CT2 7PB
 England

Area: United Kingdom

Contact: Deri Jones +44 227 475497 email dj@Britain.EU.net

Deri G Jones
 Sales & Marketing Manager
 EUnet GB

-----**UK (DEMON INTERNET LIMITED)**-----

DEMON INTERNET LIMITED
 =====
 42 Hendon Lane
 Finchley
 London
 N3 1TT
 081-349 0063

031-552 0344
email internet@demon.net

SERVICES.TXT - DETAILS OF SERVICES AND PRODUCTS OFFERED.
The latest version of this document is available from
ftp.demon.co.uk:/pub/doc

Internet Connections
Consultancy and Programming Services
Modems, Serial Chips and Serial Cards
Apricot Systems
Books

All prices quoted are correct as at 29th September 1993. Please note that all prices exclude VAT. Books are Zero rated, all other products and services are subject to VAT at the standard rate.

Internet Connections =====

The minimum subscription period is just one month apart from the Mail Forwarding option which is an annual contract. All payments are due in advance of using any service. All services include direct connection to the Internet, mail and Usenet news. Your computer will need to run PPP or SLIP - we have software available for most machines.

Standard Dialup =====

Your computer on the Internet with your own Internet address. File transfer (ftp) directly to and from your computer. Multiple sessions - download/upload mail and news, telnet and ftp all at the same time. Full read/write Usenet news feed - the world-wide conferencing system with over 5000 groups. Multiple mail addresses, e.g.:

grahame@yourmc.demon.co.uk
cliff@yourmc.demon.co.uk
postmaster@yourmc.demon.co.uk

Mail must only be processed on the computer connected to us and not passed on to other computers for composing or reading.

Setup fee #12.50. Fixed price #10 per month. No on-line charges or charges for mail etc.

You have to pay your telephone service provider (BT or Mercury) their normal charges. However, once you have connected to your nearest Demon Point of Presence (PoP) you pay no extra - even if you connect to international sites. Connect to London (32 lines), Warrington (8 lines local call from Manchester and Liverpool) or Edinburgh (8 lines).

Payment for home users can be made monthly in advance by Access or Visa credit cards. You may pay annually by cash, cheque or credit card. No VAT invoices or receipts for monthly payments are issued.

Companies are requested to pay annually in advance and will receive a formal VAT invoice. Should you cancel your subscription, any whole months' outstanding will be refunded.

Mail Forwarding =====

A supplementary annual charge to the Standard Dialup Service allowing you to use your own domain (e.g. yourco.com) and allowing mail to be forwarded around an internal network. #200 per annum.

Network Connections =====

Put your whole network, up to 253 computers, onto the Internet

via dial up reserved line, 14.4K leased line or 64K leased line. All network connections include use of your own domain name and thus are not subject to the Mail Forwarding charge. If you already have your own Class C internet address we can route to that or we will register one on your behalf. You may connect to our nearest Point of Presence (PoP). We can recommend and supply suitable routers and advise on software. We will arrange the installation of leased lines on your behalf, however all BT installation and line costs must be met by you.

Reserved line

=====

A reserved V.32bis/V42bis modem and telephone line at your nearest Point of Presence (PoP). At no extra cost you can take the bi-directional option so that we can dial you when there is incoming mail and/or ftp and telnet sessions - any BT rental and line charges will be invoiced on. Setup #750. Monthly charge #100.

*** Leased line options carry a 24 hour support contract ***

14.4K Leased Line

=====

A leased line with a V.32bis/V.42bis modem at each end - the modem at your end is supplied on a free rental basis by us. Setup #1,000. Monthly charge #200.

64K Leased Line

=====

A 64K leased line for maximum throughput. Setup #1,000. Monthly charge #400.

Joining Info

=====

We need to know:

Your Name
Company Name
Address
Credit Card No & Expiry Date if paying by Access or Visa
Credit Card address (if different)
Monthly or Annual account?
Telephone No.
Machine name 1st choice _____ .demon.co.uk 4 - 8 characters
Machine name 2nd choice _____ .demon.co.uk 4 - 8 characters
OR Domain name _____ for Mail forwarding/networks -
any length

Support

=====

Support for Internet customers is available as follows:

Monday - Friday (excluding Bank holidays)

9am - 12:30 2pm-6pm 081-349 0063 (4 lines)
or 031-552 0344
6pm - 9pm 081-343 3881

Saturdays 9am - 6pm 081-343 3881

Emergencies Only at all other times 081-343 3881

Consultancy and Programming Services

=====

We have considerable experience in communications as well as producing high quality custom software, written in C, for a wide range of applications. Please contact us to see if we can help.

Charges: #500 per day. Minimum of half a day.

Modems, Serial Chips and Boards

=====
We are dealers for the US Robotics/Miracom range of modems.

Modems in stock and on offer are:

Worldport

V21, V22, V22bis, V23, V42 (error correction), V42bis (compression including MNP/5), V.32 (9,600 bps full duplex), V32bis (14,400 bps full duplex) also includes Group 3 Fax with WinFax Lite, DOSFaxLite software and a 9/25 to 25 pin cable for the PC. Portable battery (supplied) powered or main (supplied) powered. Retail #499. Our Price #230

Sportster

V21, V22, V22bis, V23, V42 (error correction), V42bis (compression including MNP/5), V.32 (9,600 bps full duplex), V32bis (14,400 bps full duplex) also includes Group 3 Fax with WinFax Lite, DOSFaxLite and BlastFax software for the PC. Retail #399. Our Price #250

Macster

As for Sportster but supplied with Mac software and cable. Our Price #250

Courier V32bis with Fax

As for Sportster but upgradable to V.Fast and has ASL - Adaptive Speed Levelling which allows the modem connection speed to rise and fall depending on line quality. Also with Class 1 Group 3 Fax and PC FAX software WinFax Lite. Retail #699. Our Price #300

Dual Standard

As for Courier V32bis with Fax but also includes Miracom's Courier HST high speed transfer mode at 16,800 bps. This is of particular use if you intend connecting to bulletin boards which may only have high speed modems of this type. Retail price #899. Our Price #350

All USR modems come with a 5 year parts and labour warrantee.

Next (working) day delivery is #11.50 for the first modem and #2 per subsequent modem. Please add #25 per modem if paying on account.

All prices exclude VAT.
Access/Visa credit cards accepted or Cash/Cheque with order.
email orders@demon.net, fax 081-349 0309 or phone 081-349 0063

We have 16550 serial chips for the PC at #16 each.

Our stock of serial boards for the PC varies depending on availability. Currently we have just one version - a single port card containing one 16550 with a 25 way connector for #35. Postage and Packing #5.

Apricot Systems

=====

We are an Apricot Systems Centre and Authorised Unix Centre. Please contact us should you have any requirement. Many people do not realise that Apricot have an excellent range of high-specification PCs at low prices. Call 081-349 0063 or email orders@demon.net for more info.

Books

=====

We offer a computer book service. Prices are the suggested retail price. We use first class recorded delivery and for 1 book the cost is #2.50. We endeavour to keep delivery charges to a minimum and thus will pass on any savings if ordering more than one book at a time.

We keep popular books in stock. Others will be got in to order and may take 3-5 days longer. We will advise you if we expect

any undue delay. The following O'Reilly books are in stock and are recommended reading for those of you interested in the Internet:

The Whole Internet - User Guide and Catalogue by Ed Krol #18.95
 TCP/IP Network Administration - Craig Hunt. #22.95
 Programming Perl - Wall. #22.95
 Learning GNU Emacs #23.75
 Practical Unix Security Garfinkel/Spafford #26.95

Please email orders@demon.net for a complete list.

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Grahame Davies          DEMON INTERNET LIMITED          Tel +44 81-349 0063
Demon Systems Ltd.     Your computer *on* the          Fax +44 81-349 0309
42 Hendon Lane        Internet inc. Usenet feed
Finchley London N3 1TT & email #10/month fixed.
  
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-----UK (PIPEX)-----

My company is PIPEX Ltd and we are the leading Internet connection service in the UK. We offer a range of services - 64Kbps+ leased line, ISDN, PSTN, X.25 targeted at connecting company LANS to the Internet and also a lower level e-mail only service for home use.

We maintain highest levels of customer service and provide a fully supported and easy to use connections. Our high international bandwidth connections ensure we are the No.1 NetNews hub by volume in Europe and No.9 in the world.

Following this message you will receive our FAQ (Frequently Asked Questions) giving details of our services and prices. You will also receive the standard friendly welcome! There is quite a lot of information in this document so feel free to extract sections as appropriate to your needs.

If you would like me to send hard copy documentation for the December event please let me know and give me the address to use.

I would be happy to answer any questions you may have. Please contact me if I can be of further help.

Regards

Mark Hugo

```

Mark Hugo   Sales Manager
PIPEX (Public IP EXchange)
Email: mark@pipex.net
Tel: (44) 223-250120
Fax: (44) 223-250121
                216 Cambridge Science Park
                Milton Road
                Cambridge, England CB4 4WA
  
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Frequently Asked Questions (FAQ) v32

This article contains the answers to some Frequently Asked Questions (FAQ) about the PIPEX services. Questions marked with a + sign are new to this issue; those with significant changes since the last broadcast issue are marked by a *.

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Subject: 1   What do PIPEX Worldwide and UK Leased Line Services include ?
Subject: 2   What do I get for the Worldwide PLUS service ?
Subject: 3   What do I get for the Worldwide service ?
Subject: 4   What do I get for the UK PLUS service ?
Subject: 5   What do I get for the UK service ?
Subject: 6   What do I get for the Wide Area Network Management option ?
Subject: 7   Can I resell access to the PIPEX network ?
Subject: 8   What do I get for the Caller service ?
Subject: 9   What do I get for the Caller PLUS service ?
Subject: 10  What do I get for the Callback option ?
Subject: 11  What do I get for the LOCAL service ?
Subject: 12  What do I get for the LOCAL PLUS service ?
Subject: 13+ What do I get for the ISDN PLUS service ?
Subject: 14+ What do I get for the ISDN service ?
Subject: 15+ What do I get for the ISDN Backup Option ?
Subject: 16+ What do I get for the X.25 Caller service ?
Subject: 17+ What do I get for the X.25 Caller PLUS service ?
Subject: 18+ What do I get for the PIPEX PAD service ?
Subject: 19  What do I get for the Relay service ?
Subject: 20  What do I get for the X.400 Conversion Option ?
Subject: 21+ What facilities does PIPEX have at the Cambridge POP ?
  
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Subject: 22+ What facilities does PIPEX have at the West London POP ?
Subject: 23+ What facilities does PIPEX have at the East London POP ?
Subject: 24 What network connectivity does PIPEX have ?
Subject: 25 How is PIPEX 24-hour Hotline Support provided ?
Subject: 26 What guarantees of service do I get ?
Subject: 27 What other services are available ?
Subject: 28 What services will PIPEX provide in the future ?
Subject: 29 Can I get email via the Internet ?
Subject: 30 Can I get Usenet News via the Internet ?
Subject: 31 What sort of router is included in the cost of the UK and
Worldwide PLUS services ?
Subject: 32 I have a router on my network already. Can I use it to connect
to PIPEX UK and Worldwide services ?
Subject: 33 Can I connect a single computer to PIPEX, or use a computer
directly connected to PIPEX as a router ?
Subject: 34 Can PIPEX be used to carry non-TCP/IP network traffic, such as
for Novell PC networks ?
Subject: 35 Will connecting my network to the Internet via PIPEX pose a
security threat to my company ?
Subject: 36 What domain will I be registered in for e-mail and name service
?
Subject: 37 How do I get an IP address ?

If you have suggestions or corrections for any of these answers or any further questions, please send them directly to pipex@pipex.net; the information will be included in the next revision. To receive further copies of this FAQ as it is updated, together with other relevant information, please send a request to pipex-info-request@pipex.net, or phone PIPEX on 0223 250120, or fax PIPEX on 0223 250121.

Major changes since last version :

- 1 Addition of Caller PLUS Callback option
- 2 Addition of ISDN Services
- 3 New Central London POP and new equipment
- 4 X.25 Caller Service

Subject: 1 What do Worldwide and UK Leased Line Services include?

Answer:

- Exclusive use of a 64kbps leased line from your site to a PIPEX Point of Presence (POP). All costs related to the leased line are included in the PIPEX charge.
- Unlimited network traffic. PIPEX imposes NO acceptable use policy on its network.
- A complete news feed over NNTP. The customer may request not to receive some or all new groups.
- A backup email store and forward service over SMTP only. Customers are expected to have a main mailhost which will send and receive SMTP mail using the DNS MX records. PIPEX can only provide a full support service if the customer's technical and administration points of contact are contactable easily via email.
- 24-hour availability. The network will be available at all times, except for scheduled maintenance periods (typically 1/2 hour per month).
- Round-the-clock support. PIPEX operates 7x24 (7 days per week/24 hours per day) Hotline Support.
- PIPEX does not normally configure customer equipment as part of the service. Configuration of customer equipment is included in the PIPEX Wide

Area Network management option.

Subject: 2 What do I get for the Worldwide PLUS service?

Answer:

- All the services mentioned in 1 above.
- Access via the PIPEX international links to international sites. Bandwidth on the international links is subject to availability.
- Access via CIX (Commercial Internet Exchange) to all the CIX members' commercial networks.
- Lease of an appropriate router, installed at your site.
- The Worldwide PLUS service costs GBP 11,500 per annum, paid quarterly in advance plus GBP 1,800 installation charge.

Subject: 3 What do I get for the Worldwide service?

Answer:

- All the services mentioned in 1 above.
- Access via the PIPEX international links to international sites. Bandwidth on the international links is subject to availability.
- Access via CIX (Commercial Internet Exchange) to all the CIX members' commercial networks.

Note: Customers will need to make their own provision for a router.

- The Worldwide service costs GBP 9,400 per annum, paid quarterly in advance plus GBP 1,000 installation charge.

Subject: 4 What do I get for the UK PLUS service?

Answer:

- All the services mentioned in 1 above.
- Lease of an appropriate router, installed at your site.
- The UK PLUS service costs GBP 9,600 per annum, paid quarterly in advance plus GBP 1,800 installation charge.

Subject: 5 What do I get for the UK service?

Answer:

- All the services mentioned in 1 above.

Note: Customers will need to make their own provision for a router.

The UK service costs GBP 7,500 per annum, paid quarterly in advance plus GBP 1,000 installation charge.

Subject: 6 What do I get for the Wide Area Network Management option?

Answer:

The Wide Area Network Management option is aimed at customers who require assistance in configuration of their network in preparation for connection to the Internet and do not have the resources to manage all the various parts that need to work together to maintain a high quality connection to the Internet. Connection to the Internet requires consideration of (at least) the following areas:

IP numbering

- Renumbering hosts
- Numbering schemes
- Subnets
- Naming conventions

Router configuration

- IP filtering
- Routing protocols

Domain Name Service

- Primary Domain Name Server configuration
- Secondary Domain Name Server configuration
- YP/DNS interworking

UNIX security

- Logins
- Network subnetting

TCP services

- FTP (File Transfer Protocol): used for accessing files on remote hosts
- SMTP (Simple Mail Transfer Protocol): used for transfer of email between remote hosts
- NTP (Network Time Protocol): used to synchronise time on remote hosts
- NNTP (Network News Transfer Protocol): used to send news articles in real time
- As part of the Wide Area Network Management option, PIPEX will provide assistance and advice in all of the above areas, tailored to your particular network.
- PIPEX will configure your router both for the initial configuration and for any ongoing requirements. As well as obvious routing requirements, PIPEX will also configure your router to provide any required security through the use of IP filtering.
- PIPEX will if required provide the Primary Domain Name Server for your site, at a PIPEX Point of Presence (POP). PIPEX will also arrange to provide secondary Domain Name Servers.
- As well as providing the initial configuration and setup, PIPEX will change the customer's DNS configuration as and when required, on request

from the customer's Technical Contact. In the case where the primary DNS is at the customer site, the customer must allow access across the network to PIPEX engineers as required to reconfigure the DNS.

- PIPEX can help administer aspects of the TCP services mentioned above, and help configure machines appropriately, or provide relevant information on how to set up the appropriate configurations. In particular, PIPEX have considerable experience of administering the above TCP services on Sun and VAX/VMS workstations, and can usually provide example configurations.
- PIPEX will provide an email store-and-forward facility as part of this service. This will be mostly used as a backup when for some reason the customer main mail host is unavailable.
- PIPEX will help with configuration of the customer mail system to ensure that it will work properly in an Internet environment.

- If required, PIPEX can release space on its anonymous ftp server for files that the customer would like others to have access to without having to administer the ftp services on a local machine.
- Any work done by PIPEX engineers will be documented, and if necessary explained to the customer Technical Point of Contact (POC). Wherever possible, technical contact between customers and PIPEX will be carried out electronically, using the PIPEX network. Primary means of communication will be via email.
- Two days on-site consultancy. This will include assistance in all the items mentioned under IP numbering, Router configuration, Domain Name Service, UNIX security and TCP services.
- Round-the-clock support. PIPEX operates 7x24 (7 days-a-week/24-hours-a-day) Hotline Support. This service is only available as an option to customers purchasing a PIPEX leased line service.

The prices quoted below do not cover consultancy for major network configuration changes, or for on-site visits. If these are required, PIPEX will make an appropriate charge for the consultancy, depending on the nature of the work performed.

The Wide Area Network Management option costs GBP 1,000 per annum, paid quarterly in advance plus GBP 1,000 for the initial configuration and consultancy. This charge is in addition to any cost associated with the PIPEX leased line service which is a requirement of this option.

Subject: 7 Can I resell access to the PIPEX network?

Answer:

- Yes, so long as you have a leased line PIPEX service and subject to the PIPEX Reseller Terms And Conditions. Please ask pipex@pipex.net for details.
- You may not resell access to the PIPEX network unless you have a 64kbps leased line service.

Subject: 8 What do I get for the Caller service?

Answer:

- The Caller service will allow customers both terminal service access (via telnet) and dialup IP access (via PPP or SLIP) to the PIPEX network over standard PSTN (BT and Mercury) analogue phone circuits.
- The PPP and SLIP implementations used by PIPEX allow use of IP Header Compression (RFC 1144), which significantly improves response over limited bandwidth lines.
- Access via the PIPEX international links to international sites. Bandwidth on the international links is subject to availability.
- Access via CIX (Commercial Internet Exchange) to all the CIX members'

commercial networks.

- An email store and forward service over SMTP only.
- A complete news feed over NNTP. The customer may request not to receive some or all new groups.
- PIPEX resell Morning Star PPP. This software works on all common unix machines and is capable of establishing and maintaining a PPP connection, suitable for a PIPEX connection. PIPEX can provide this software as part of a PIPEX connection.

Note: The customer is responsible for providing a modem at their end. This should be capable of operation using V.32 (9.6kbps) or V.32bis (14.4kbps) modulation. Error correction using V.42, and compression using V.42bis, are also highly desirable, though MNP may be used for these instead. PIPEX can provide V.32bis modems for an additional charge. The customer will be responsible for all connection charges associated with use of the phone line to PIPEX.

The Caller Service is GBP 500 per quarter, paid in advance and GBP 250 joining fee.

Morning Star PPP costs GBP 550 in addition to the PIPEX service.

Subject: 9 What do I get for the Caller PLUS service?

Answer:

- The Caller PLUS service will allow customers dialup IP access (via PPP) to the PIPEX network over standard PSTN (BT and Mercury) analogue phone circuits.
- The modems supplied with the Caller PLUS service are US Robotics V.32bis modems, giving an access speed of 14.4kbps. V.42bis compression is also supported, giving an effective speed of 19.2kbps or greater.
- The PPP and SLIP implementations used by PIPEX allow use of IP Header Compression (RFC 1144), which significantly improves response over limited bandwidth dialup lines.
- Access via the PIPEX international links to international sites. Bandwidth on the international links is subject to availability.
- Access via CIX (Commercial Internet Exchange) to all the CIX members' commercial networks.
- Lease of a modem at the customer site.
- Lease of an appropriate dialup IP router. This will normally be a Telebit NetBlazer. The NetBlazer will route any IP packets intended for other networks by initiating a dialup to the PIPEX POP and routing the packet to the PIPEX network. The NetBlazer is capable of driving the line at full speed and ensures that CPU is not taken up on a host machine on the customer network.
- The NetBlazer can also be used for PIPEX leased line services, enabling easy upgrade in the future. Customers can upgrade to the PIPEX leased line service at any time (giving PIPEX at least one month's notice in writing) for an administration cost of GBP 750 plus the difference in annual rental between the two services.
- An email store and forward service.
- A complete news feed over NNTP. The customer may request not to receive some or all news groups. The customer will be responsible for all connection charges associated with use of the phone line to PIPEX. This is a dial-in only service. PIPEX will only make outgoing calls to the customer site for maintenance and support purposes.

The Caller PLUS Service costs GBP 4,000 per annum, paid quarterly in advance plus GBP 1,500 installation charge.

Subject: 10 What do I get for the Callback Option?

Answer:

- The Callback option is available as an option in addition to the Caller PLUS service.
- With this option, when there is incoming IP traffic destined for the customer, PIPEX will actively call the customer Router and establish a connection, allowing the IP traffic to be routed. This will enable e.g. an incoming email message to be sent immediately, rather than waiting for the customer to call out to PIPEX in order to collect the mail. In addition (if the customer IP filtering allows it) incoming ftp and telnet access is allowed.
- This option is only available where the customer has a direct phone number which will be routed straight to the PIPEX router on the customer site. An extension, or other mechanism which needs manual intervention in order to router the incoming line to the customer end router will not enable PIPEX to call out to the customer.

The Callback Option costs GBP 1000 per annum, paid quarterly in advance in addition to the Caller PLUS Service. If the cost incurred by PIPEX in calling the customer exceed GBP 150 in each quarter, the customer will be invoiced for any amounts over GBP 150 incurred in that quarter, with a minimum invoice amount of GBP 50.

Subject: 11 What do I get for the Local service?

Answer:

- Exclusive use of a fixed circuit from your site to a PIPEX Point of Presence (POP). All costs related to the line are included in the PIPEX charge. The connection is over an asynchronous serial line using PPP or SLIP.
- For customers are who within 15km of a PIPEX Point of Presence (POP) but not on the same local phone exchange, the circuit will be an EPS-25 analogue line. Customers will be provided with modems at each end of the circuit as part of this service.
- Where modems are supplied with the Local service, they will be V.32bis modems, giving an effective speed of 14.4kbps. In both cases, V.42bis compression is also supported, giving an effective speed of 19.2kbps or greater.
- The PPP and SLIP implementations used by PIPEX allow use of IP Header Compression (RFC 1144), which significantly improves response over limited bandwidth lines.
- Unlimited network traffic. PIPEX imposes NO acceptable use policy on its network.
- 24-hour availability. The network will be available at all times, except for scheduled maintenance periods (typically one hour per month).
- Round-the-clock support. PIPEX operates 7x24 (7 days-a-week /24-hours-a-day) Hotline Support.
- Access via the PIPEX international links to international sites. Bandwidth on the international links is subject to availability.
- Access via CIX (Commercial Internet Exchange) to all the CIX members' commercial networks.

The customer will be responsible for providing equipment at the customer end to connect the line termination unit to their local network. In most cases this will require a serial cable into a suitable computer.

The Local service costs GBP 5,000 per annum, paid quarterly in advance plus GBP 1,500 installation charge.

Subject: 12 What do I get for the Local PLUS service?

Answer:

- All the services mentioned in 11 above.
- Lease of an appropriate router. This will normally be a Telebit NetBlazer. The NetBlazer is capable of driving the line at full speed and ensures that CPU is not taken up on a host machine on their network.
- The NetBlazer can also be used for PIPEX leased line services, enabling easy upgrade in the future. Customers can upgrade to the PIPEX leased line service at any time (giving PIPEX at least one month's notice in writing) for an administration cost of GBP 750 plus the difference in annual rental between the two services.

The Local PLUS Service costs GBP 6,000 per annum, paid quarterly in advance plus GBP 1,800 installation charge.

Subject: 13 What do I get for the ISDN PLUS service ?

Answer:

- The ISDN PLUS service will allow customers dialup IP access (via PPP) to the PIPEX network over BT's ISDN phone network.
- The terminal adapters supplied with the ISDN PLUS service are Controlware CITAM units, operating in synchronous mode giving an access speed of 64kbps.
- Access via the PIPEX international links to international sites. Bandwidth on the international links is subject to availability.
- Access via CIX (Commercial Internet Exchange) to all the CIX members' commercial networks.
- Lease of an ISDN terminal adapter at the customer site.
- Lease of an appropriate dialup IP router. This will normally be a Telebit NetBlazer. The NetBlazer will route any IP packets intended for other networks by initiating an ISDN dialup to the PIPEX POP and routing the packet to the PIPEX network. The NetBlazer is capable of driving the line at full speed and ensures that CPU is not taken up on a host machine on the customer network.
- The NetBlazer can also be used for PIPEX leased line services, enabling easy upgrade in the future. Customers can upgrade to the PIPEX leased line service at any time (giving PIPEX at least one month's notice in writing) for an administration cost of GBP 750 plus the difference in annual rental between the two services.
- An email store and forward service.
- A complete news feed via NNTP. The customer may request not to receive some or all new groups.

The customer will be responsible for all connection charges associated with use of the phone line to PIPEX. This is a dial-in only service. PIPEX will only make outgoing calls to the customer site for maintenance and support purposes.

The customer is responsible for arranging the installation of the ISDN line to their site with BT. BT ISDN line costs are GBP 200 installation and GBP 168 annual rental.

The ISDN PLUS Service costs GBP 6000 per annum, paid quarterly in advance plus GBP 1800 installation charge.

Subject: 14 What do I get for the ISDN service ?

Answer:

- The ISDN service will allow customers with suitably equipped systems dialup IP access (via PPP) to the PIPEX network over ET's ISDN phone network.
- The ISDN service supports 64kbps synchronous connections.
- Access via the PIPEX international links to international sites. Bandwidth on the international links is subject to availability.
- Access via CIX (Commercial Internet Exchange) to all the CIX members' commercial networks.
- An email store and forward service over SMTP only.
- A complete news feed over NNTP. The customer may request not to receive some or all new groups.
- The customer is responsible for arranging the installation of the ISDN line to their site with BT. BT ISDN line costs are GBP 200 installation and GBP 168 annual rental. The customer will be responsible for all connection charges associated with use of the phone line to PIPEX.

Note: The customer is responsible for ensuring that their system is capable of connecting to the ISDN service. Systems must be capable of using V.25bis dialling to initiate the connection, they must be capable of supplying suitable identification to the PIPEX POP, and using PPP over the link. Systems which have so far been identified as being suitably equipped include SMC Sparc10 and SparcLX systems with SunLink ISDN-BRI Enabling Kit, and SMC Sparcstation and Sparcserver systems with an ISDN Expansion Kit (includes SBus card and software).

The ISDN Service is GBP 1000 per quarter, paid in advance plus GBP 1000 joining fee.

Subject: 15 What do I get for the ISDN Backup Option ?

Answer:

- The ISDN Backup Option will give customers who have purchased the Worldwide PLUS service backup over an ISDN dialup line in the event of the leased line failing.
- The backup units monitor the Kilostream line. In the event of a line fault between the customer and PIPEX end, the unit initiates a connection over the ISDN. The unit monitors the Kilostream line and when it is available again, the ISDN call is cleared.
- The backup units supplied with the ISDN Backup service are Controlware IDB units, operating in synchronous mode giving a transfer speed of 64kbps.
- PIPEX will be responsible for installation, maintenance and payment of the ISDN line, and costs incurred for ISDN calls during backup are included in the cost of this service.

The ISDN Backup Option is GBP 2500 per annum, paid quarterly in advance and GBP 1500 joining fee in addition to the cost of the Worldwide PLUS Service.

Subject: 16 What do I get for the X.25 Caller service ?

Answer:

- Use of the shared 64k interconnection between PIPEX and the public X.25 network you are connected to, to route IP traffic between your site and the Internet via PIPEX.

- P traffic is carried between the customer site and PIPEX over the public X.25 network using the RFC 877 standard. For routers which support it (currently only Cisco), IP header compression is supported to improve interactive response across low speed (<19.2kbps) links.
- 24-hour availability. The network will be available at all times, except for scheduled maintenance periods (typically 1/2 hour per month).
- IP traffic is carried between the customer site and PIPEX over the public X.25 network using the RFC 877 standard. For routers which support it (currently only Cisco), IP header compression is supported to improve interactive response across low speed (<19.2kbps) links.
- Round-the-clock support. PIPEX operates 7x24 (7 days per week/24 hours per day) Hotline Support.
- Access via the PIPEX international links to international sites. Bandwidth on the international links is subject to availability.
- Access via CIX (Commercial Internet Exchange) to all the CIX members' commercial networks.
- An email store and forward service over SMTP only.
- A complete news feed over NNTP. The customer may request not to receive some or all news groups.

Note: Customers requiring to use this service must have a dedicated synchronous connection into a public X.25 service (for example BT's PSS or Mercury 5000 in the UK, international carriers such as BT GNS and Sprint, or the local PTT in other countries). PIPEX can put you in touch with an X.25 service provider if you are not already connected.

All volume/duration usage charges on the X.25 network must be paid for by the customer - PIPEX will not normally call the customer unless they are prepared and able to accept reverse charge calls from PIPEX.

The PIPEX X.25 Service has two cost ranges, depending on the speed at which the customer is connected into the X.25 network.

For connection at speeds of 19.2kbps or less, the X.25 Caller Service is GBP 500 per quarter, paid in advance, and GBP 250 joining fee.

For connection at speeds of 48kbps and 64kbps, the X.25 Caller Service is GBP 1250 per quarter, paid in advance, and GBP 500 joining fee.

Subject: 17 What do I get for the X.25 Caller PLUS service ?

Answer:

All the services mentioned in the X.25 Caller service above.

- Lease of an appropriate router. This will normally be a Cisco IGS/R, which supports IP header compression over X.25 links to improve interactive response at low speeds.

This service is available in the UK, and in many European countries.

For access speeds of 19.2kbps or lower in the UK, X.25 Caller PLUS service costs GBP 1300 per quarter, paid in advance, plus GBP 1800 installation charge. For higher access speeds, or for router lease outside the UK, please contact PIPEX for further details.

Subject: 18 What do I get for the PIPEX PAD service ?

Answer:

- On X.25 networks, including JANET, the Mercury 5000 and BT's PSS networks, the protocol used for interactive login to a host computer across the network (the X.25 equivalent of Telnet) is known as PAD protocol (or sometimes X.29 or XXX).

PIPEX have a Protocol Translator host, a Cisco IGS router with additional software, which can convert between Internet Telnet and X.25 PAD sessions. This allows users who can log into one network to have access to hosts on the other.

Subscribers to this service can:

Log into hosts on the JANET X.25 network from Internet hosts

Log into Internet hosts from the JANET X.25 network

Log into Internet hosts from public X.25 networks

The last point is particularly useful for users that only have asynchronous dial-up access to an X.25 network - such dial-in access points are available from a local call across most of the UK (using Mercury 5000 or PSS DialPlus), and also in many countries where there is no dial-up Internet access.

Note: If you have a synchronous dedicated connection to a public X.25 network, the PIPEX X.25 Caller service is probably more appropriate. Also, this conversion service only works for interactive login - other applications, such as file transfer and electronic mail, require the X.25 Caller service, as there are no equivalent application protocols in common use on X.25 networks.

PIPEX PAD service costs GBP 250 per quarter which guarantees 10 simultaneous sessions or accounts for your organisation's use.

For existing PIPEX customers only, it is possible to set up individual accounts as well - the cost for these is GBP 25 per quarter per account.

Subject: 19 What do I get for the Relay service ?

Answer:

- The Relay service is for customers who already have an Internet connection, but want additional Internet services. It provides several such services.

Secondary Domain Name Service for a forward domain and an Inverse domain.

PIPEX will act as Secondary MX relay to store and forward email for the site if the Primary MX Relay is unavailable.

A full news feed over NNTP.

The Relay Service costs GBP 800 per annum, paid quarterly in advance. There is no setup fee.

Subject: 20 What do I get for the X.400 Conversion Option ?

Answer:

- The X.400 Conversion Option provides a protocol conversion facility between X.400 email and other supported forms of email, including SMTP and Greybook.
- This service is only available on top of a standard PIPEX leased line connection.
- This service is only supported over IP. The customer X.400 MTA must be able to talk to relay.pipex.net over the IP connection using X.400 over TCP/IP to RFC 1006.
- There is a limit of 1000 messages per day that will be converted . Higher counts than this are available by negotiation.
- Note that this facility does NOT gateway X.400 email to the external X.400 world. PIPEX are currently developing the Gateway Service which will gateway X.400 email to the X.400 world. An announcement is expected shortly.

The PIPEX X.400 Conversion Option costs GBP 1600 per annum, paid quarterly in advance. There is no setup fee.

Subject: 21 What facilities does PIPEX have at the Cambridge POP?

Answer:

- The main PIPEX POP has 2 Cisco AGS+ routers. cam-gw1 has 24 serial ports and two Ethernet ports. cam-gw2 has 26 serial ports and two Ethernet ports.
- Domain Name Service is provided by a SPARCstation IPC (ns.pipex.net) running SunOS 4.1.2. ns.pipex.net has 48MB memory and 3 GB disk, with a Prestoserve card which greatly improves disk IO performance. It currently also acts as host for collecting and distributing news and providing an anonymous ftp service (ftp.pipex.net). It has recently started to run PP, a powerful mail switch, allowing it to provide an effective email store and forward service, as well as Application Relay facilities.
- A SPARCstation IPC (tank.pipex.net) running SunOS 4.1.3 provides news services as news.pipex.net. This runs a news system called INN which provides NNTP news feeds in real time.
- A SPARCstation IPC (sink.pipex.net) running SunOS 4.1.3 provides Network Management services.
- Dialup services are provided by a Telebit NetBlazer with a rack of Miracom V.32bis modems.
- Two ISDN2 circuits (four channels in all) have been installed for use with the ISDN services.
- 64K Leased line connections are provided over a a pair of BT KiloStream PLUS units served by a MegaStream unit linked to the BT local exchange over fibre optic cable.
- The transatlantic 128K connection to AlterNet and the 256K line to the London POP are provided via Mercury, who have installed a full Mercury connection for PIPEX. PIPEX will for some existing Mercury customers make use of Mercury for the leased line connection.
- The Cambridge POP is all within the PIPEX Comms Room, which has access via a card-swipe mechanism, preventing unauthorised access.
- An Uninterruptable Power Supply provides power to the entire Cambridge POP, protecting it from a power failure, as well as power spikes and

brownouts.

- Maps of the PIPEX network are available for anonymous ftp from ftp.pipex.net:/pub/maps/Pipex-*

Subject: 22 What facilities does PIPEX have at the West London POP?

Answer:

- The West London PIPEX POP has two Cisco AGS+ routers. Both have 26 serial ports and two Ethernet ports.
- Dialup/Local services are provided by a Telebit NetBlazer with a rack of Miracom V.32bis modems.
- The London POP is all within the Mercury Facilities Management Centre at Brentside in west London.
- An Uninterruptable Power Supply provides power to the entire London POP, protecting it from a power failure, as well as power spikes and brownouts.
- The West London POP is connected to the Cambridge POP with a 256kbps line, with a 64bps line acting as a backup in case of any problems.

Subject: 23 What facilities does PIPEX have at the East London POP?

Answer:

- The East London PIPEX POP will be commissioned in mid June 1993. It will be configured similarly to the West London POP with two Cisco AGS+ routers. Both have 26 serial ports and two Ethernet ports.
- Dialup/Local services are provided by a Telebit NetBlazer with a rack of Miracom V.32bis modems.
- The East London POP is all within the Telehouse Facilities Management Centre at the East India Dock.
- An Uninterruptable Power Supply provides power to the entire East London POP, protecting it from a power failure, as well as power spikes and brownouts.
- The East London POP is connected to the Cambridge POP with a 256kbps line, with a 128bps line going to the West London POP.

Subject: 24 What network connectivity does PIPEX have?

Answer:

- PIPEX has its own Domain, pipex.net, its own class B Internet number, 158.43.0.0, and its own autonomous system number, 1849.
- PIPEX has a 128kbps connection to AlterNet in Falls Church, Virginia (near Washington DC). This provides our main connection to the Internet, and is used to receive news, email and interactive links. It is also a backup link, should any of the others fail. This line will be upgraded to 256kbps around July 1993.
- PIPEX has a 64kbps connection via ULCC to the European Internet Backbone, the "Ebony". This network interconnects five European capitals and IP network providers in most Western and Eastern European countries via high-bandwidth 128kbps/256kbps lines, and will greatly enhance PIPEX's European connectivity.
- PIPEX has a 64kbps link to JIPS (the Joint Academic Network IP service) through the JIPS backbone site at Cambridge University. This allows direct access to any JIPS and JANET-connected networks. Transit traffic (going through JIPS/JANET to other networks) is not allowed across this link.
- PIPEX has a 64kbps link to the EUNET through the University of Kent. This allows direct access to any EUNET subscribers.
- PIPEX has a 64kbps connection via the London POP to SWIPNet, our peer network in Sweden. This allows direct connections to SWIPNet customers.

- PIPEX has a 64kbps connection to the Mercury 5000 X.25 network from the West London POP.
- PIPEX has a 64kbps connection to the Mercury 5000 X.400 network from the West London POP.
- Beyond Altnet and the Ebone, there are basically two backbones to the Internet. One, the Commercial Internet Exchange (CIX), is a single point in California to which a number of commercial Internet service providers connect. As PIPEX is a member of the CIX, all PIPEX customers can freely exchange traffic with all subscribers of other CIX member networks. This includes customers of Altnet and PSInet among others in North America, also EUnet in continental Europe, and a number of service providers in Scandinavia. It is a condition of the CIX agreement that there are no restrictions on the type of traffic which can be exchanged by CIX members' subscribers across the members' networks.
- The other main backbone to the Internet is the NSFNET (note this is nothing to do with Sun's Network File System NFS !) This is a high-speed American academic and research network funded by the National Science Foundation, a US government agency. As this is funded explicitly for research and federal activities, it is not permitted to use this network for commercial purposes. It does however, form an important part of the Internet as a whole, and subscribers to CIX member networks are permitted to use it under certain conditions. Many PIPEX customers find that they have a need to communicate across the NSFNET, most commonly with academic institutions in the USA. There are also some countries where the only Internet access is via the NSFNET. If you have such a requirement, PIPEX can help with the application process for this. Unfortunately, connection applications are considered on a case-by-case basis by the NSF, so we are not able to guarantee you will be granted NSFNET connectivity. We are able to offer as much advice and help as you require, however, and the majority of applications are generally successful.

Subject: 25 How is the PIPEX 24-hour support provided?

Answer:

- At all times, PIPEX Hotline Support is the first point of contact for the customer in case of problems with the PIPEX network.
- During working hours (9am-5pm Monday-Friday excluding Bank Holidays) on-site engineers will provide our normal support service. This is backed up by 4-hour call-out support from the telecommunications suppliers and router vendors.
- Outside working hours, one of our PIPEX Support Engineers will always be on call. They will always be within close reach of an Internet connection which can be used to help diagnose and resolve your problem, as well as the PIPEX NOC (Network Operations Centre).
- The Engineer on call always has a pager. The PIPEX network checking program is able to raise an alarm page in the event of any network failure.

Subject: 26 What guarantees of service do I get?

Answer:

- The PIPEX service contract gives details of the PIPEX service guarantee. It guarantees a 99% availability for each connection. So far, the PIPEX network has had an availability greater than 99.5%.

Ask PIPEX for a copy of the PIPEX Terms Of Service contract.

Subject: 27 What other services are available ?

Answer:

- Connections at greater than 64kbps.
- Dialup Connections from European locations.
- One-stop shop ordering for connections in the UK, US and Sweden.

- PIPEX now offer anonymous ftp access to a machine on the PIPEX network(ftp.pipex.net). This holds up-to-date information about PIPEX and access to useful network information. It will be updated and improved over time.
- PIPEX sell Morning Star PPP, usually for installation on a unix machine to act as the router for a PIPEX Caller service.

Please call PIPEX if you want any more information about any of the above services.

- Other services (see next item), will be announced as they become available.

Subject: 28 [P1]What services will PIPEX provide in the future?

Answer:

PIPEX will either provide directly or provide through a third party the following services :

- Archive sites.
- Public Access Unix Logins.
- X.25 connections to the Internet.
- TCP services of all kinds over the IP network.
- Email conversion to other protocols.
- PIPEX intend to offer NTP synchronisation at stratum 2 in the short term; we may go to level 1 in the future.

Subject: 29 Can I get email via the Internet?

Answer:

Yes. As soon as you are physically connected to the Internet, mail for your site is sent directly via IP to your router, which in turn routes it to the mail gateway machine on your network. PIPEX provides an email store and forward service as part of the Caller service. A backup email store and forward service is included as part of the leased line services.

Subject: 30 Can I get Usenet News via the Internet?

Answer:

Yes. PIPEX will arrange for a full feed of Usenet news as available at its machines to any leased line or Caller customer who requests it. This will usually be done directly from a machine operated by PIPEX, or may be from another customer's site.

PIPEX has a comprehensive news feed, including all groups handled by uunet and with a number of other feeds covering UK and various regional newsgroups.

If you take a news feed from PIPEX, we may ask you at some time to make an onward feed available to a maximum of two other PIPEX customers. You may if you wish supply Usenet news to third parties. Some news originating in Europe may be covered by agreements about redistribution over which PIPEX has no control. You may have to become a party to these agreements in order to receive these articles.

There is no additional charge for taking a news feed from PIPEX via a leased line.

PIPEX will provide on request an NNTP "IHAVE" feed of whichever groups and hierarchies are required. In order to provide this, we should like some information from you - please get the file /pub/news/news-request from ftp.pipex.net, or email to support@pipex.net requesting this. You may get

active and newsgroups.Z files from ftp.pipex.net in the directory /pub/news. These will give a list of most news groups supported by Pipex (although others are forwarded).

A full news feed is approximately 53MB per day. alt.binaries.pictures is 20+% of this total. 53MB per day is approximately 7% of the maximum possible throughput of a 64kbps line.

PIPEX can supply a feed of the ClariNet news network. This is a system of feeding "real news" which is paid for by monthly subscription, typically \$20-\$50 for a 15-user site. Please make arrangements directly with ClariNet and ask for the news to be forwarded by PIPEX. For general information, start with /pub/vendor/ClariNet/README from ftp.pipex.net.

Subject: 31 What sort of router is included in the cost of the UK and Worldwide PLUS services?

Answer:

- The prices listed are for the minimum router configuration required to connect your network to the PIPEX leased line.
- The specification for the standard customer site router is at least as follows:
 - o One Ethernet interface
 - o One synchronous X.21 interface, capable of running at speeds of 64kbps to 2 Mbps
 - o One additional synchronous interface either included, or available as an expansion option for the standard unit
 - o Support for Point-to-Point Protocol ("PPP" - see RFCs 1171 and 1172) on the serial line
 - o Support for RIP (Routing Information Protocol - RFC 1058) and OSPF (Open Shortest Path First - RFC 1247) routing protocols
 - o Remote management via SNMP
 - o IP security filtering
- Normally, you will be provided with a Xyplex 6220 router, which meets the above PIPEX technical specification.
- If you require a router with additional interfaces and/or higher performance to meet your particular needs, PIPEX can help specify and supply this for you, but at additional cost to the rates quoted.

Subject: 32 I have a router on my network already. Can I use it to connect to PIPEX UK and Worldwide services?

Answer:

Yes, provided it has support for an interface and protocols compatible with PIPEX's network. For this, it must meet the router specification as in the specification above. In particular:

- It must have an X.21 synchronous interface as in the specification above. RS449 to X.21 converters are available if X.21 is not supported.
- The preferred link protocol is PPP, but other synchronous link protocols which can carry IP datagrams, such as X.25, Frame Relay, and HDLC, are also possible.
- It must be able to exchange routing information via RIP, or IGRP (Cisco's routing protocol). It is intended to phase in the new OSPF routing protocol early on, wherever possible. If your only connection to other networks is via PIPEX, it is not essential to talk a routing protocol over your link.

Subject: 33 Can I connect a single computer to PIPEX, or use a computer

directly connected to PIPEX as a router?

Answer:

Whilst hardware, and free and commercial software is available to let you do this, PIPEX believes that setting it up on a host computer is harder and not much cheaper than installing a router. We recommend leasing one from us as part of our PLUS services. For accounting reasons you may prefer to purchase your own router.

Provided the software and hardware on your host computer conforms to the standard router interface and protocol requirements above, direct connection to PIPEX is certainly possible.

PIPEX are a reseller for Morning Star PPP. This software works on all common unix machines and is capable of establishing and maintaining a PPP connection, suitable for a PIPEX connection. PIPEX can provide this software as part of a PIPEX connection.

Morning Star PPP costs GBP 550 in addition to the PIPEX service.

Subject: 34 Can PIPEX be used to carry non-TCP/IP network traffic, such as for Novell PC networks?

Answer:

It is worth pointing out that you can route any protocol over the Internet, including PIPEX, by using "encapsulation": carrying that protocol's packets inside IP datagrams.

At present our network does not support any other protocols than IP. In future, support for routing such protocols as Novell IPX, DECNet, OSI, Appletalk and XNS is certainly possible.

Subject: 35 Will connecting my network to the Internet via PIPEX pose a security threat to my company?

Answer:

Provided that adequate security measures have been taken on all your computer systems then connection to the Internet should not significantly increase security risks.

However, we understand that for many organisations, guaranteeing this level of security for all computers on their network is either impractical or insufficient.

The common way around this is to use "IP filtering" in the router which connects your network to the Internet. This allows control over which customer systems can be accessed from and to external networks. It can be set up to protect some sensitive systems, or to force all external access to your organisation through a secure "firewall" system.

The routers PIPEX can lease to you support IP filtering, and it is possible to configure access to and from your network on your router yourself (clearly you need to leave some access open to PIPEX operations staff, so they can get through to your router in case problem assistance is needed.)

If you prefer to use your own router, and it does not have IP filtering, then some security filtering can be provided for you by PIPEX, but clearly this would not be as flexible or satisfactory as controlling it yourself.

Subject: 36 What domain will I be registered in for email and name service?

Answer:

If you already have a domain registered, then that one will be used. If you do not have a domain registered, PIPEX will register one for you.

Assuming that your organisation is a commercial company within the UK, you will be registered in the ".co.uk" domain. If you are already registered in this domain, you will be able to continue using the same name.

Strictly speaking, there are three versions of the ".co.uk" domain; the Internet one which you will be registered in, the JANET one (strictly "uk.co.") and the UUCP one. The first of these is managed by the NRS (Name Registration Scheme) for the academic JANET network, and the latter two by UKNET. Registration in the NRS will also be automatically performed for you by PIPEX if you are a leased line customer. Caller service customers will have to pay the GBP 100 registration fee if they wish to be NRS-registered.

PIPEX have negotiated an interoperability agreement with UKNET, which ensures PIPEX customers can exchange mail transparently with sites in all the "uk" domains.

Note that customers will not be registered in the "pipex.net" domain. The ".net" top-level domain is intended to name things which make up part of actual networks. The only things which will appear in the "pipex.net" domain are the nodes (routers, news servers etc) which make up the infrastructure of our actual network, not customer hosts or equipment. The ".ja.net" domain is used similarly on JIPS.

Subject: 37 How do I get an IP address?

Answer:

Although it has not been very well announced to the Internet at large, there have been some significant changes to the way in which IP network numbers are assigned to organisations. This is as a consequence of the "supernetting" scheme being introduced, to make more efficient use of the rapidly exhausting IP address space. The most important change is that PIPEX, as a network service provider, has been assigned a block of Class C IP addresses, which it can re-assign to organisations requiring them. These organisations should be any existing PIPEX customers that require additional numbers, or anyone who is a new, or potential PIPEX service customer.

This should simplify, and greatly speed up, the network number allocation process, and as a consequence registration for PIPEX services. Applications for all such network numbers, Class B or C, should be directed via e-mail to: hostmaster@pipex.net.

- o Class C addresses will be assigned from PIPEX's block (193.128.1-254.0) and be registered by PIPEX. Class B applications will be forwarded to the RIPE NCC (The European Internet NIC nic.hostmaster@ripe.net) who will assign and register them. PIPEX has an option on six more Class C address blocks for future use.

Note that the American NIC (nic.ddn.mil), will no longer process network number applications directly. These should normally be directed to PIPEX from now on. hostmaster@nic.ddn.mil will, however, still process other Internet number assignments (e.g. top level domains).



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