

SiXs

Internals

27 February 2003

Jeroen Massar - jeroen@unfix.org

SixXS

SixXS accommodates an enhanced version of a tunnel broker to assist LIRs in having a rapid IPv6 deployment in their organisation by providing a native and tunneled IPv6 broker, giving IPv6 access to their clients even though client hardware doesn't support IPv4.

- We are still looking for participating LIRs**

Contact Info

SixXS Main | News | **Contact** | Home | POPs | Presentations | FAQ | Misc | Links

Contact

The main contact address for SixXS is info@sixxs.net.

Abuse

Abuse and related messages should be sent directly to abuse@sixxs.net along with suitable proof, please provide as much detailed information where possible. All address space used by the SixXS POP's are documented in our [whois](#) database.

Staff Information

Name:	Pim van Pelt	Jeroen Massar
Email:	pim@sixxs.net	jeroen@sixxs.net
Homepage:	http://www.van.pelt.nl	http://unfix.org/~jeroen/
RIPE Handle:	PBVP1-RIPE	JRM1-RIPE
6BONE Handle:	PBVP1-6BONE	JRM1-6BONE

Note that sending email to both info@sixxs.net and the staff members directly won't help processing your message any faster. Use only info@sixxs.net for those cases which will reach them in any case.

Logged in as [Jeroen Massar \(JRM1-6BONE\)](#) ©2001-2003 SixXS
SSL IPv6 connection from [3fe:3114:2000:240:200:39ff:fe77:1c3](#) Last revision: Mon 24 Feb 2003 22:24:42 CET

Points of Presences



 Germany
[Cybernet AG](#)

 Ireland
[HEAnet](#)

 The Netherlands
[AMS-IX](#)
[Concepts ICT](#)
[Cybercomm](#)
[IPng](#)

Cybernet AG

Cybernet AG

Through the continuous expansion of the three complementary business areas connectivity, internet data center and e-business solutions it is our goal to set standards as market leader for integrated internet services, which support the entire business processes of our customers.

This POP provides /64 tunnels and /48 subnets using ripe space.

<http://www.cybernet-ag.de>



HeaNet

HEAnet

HEAnet is Ireland's academic and research network. It has been in operation since 1983 as a collaborative endeavour between its member institutions. From 1993 until the end of 1997, the network services were managed by UCD Computing Services, under contract to HEAnet. In November 1997, HEAnet was incorporated as a company limited by guarantee, and relocated its network operations centre to Marine House, Clanwilliam Court, Dublin. In July 2001, the company moved to new quarters in Brooklawn House, Dublin, and it is from here that all HEAnet's services are now provided.



This POP provides /64 tunnels and /48 subnets using ripe space.

<http://www.heanet.ie>

AMS-IX

AMS-IX - Amsterdam Internet Exchange

The Amsterdam Internet Exchange (AMS-IX) is a place for Internet Service Providers (ISPs) to interconnect and exchange IP traffic with each other at a national or international level. This exchanging of traffic is commonly known as peering. AMS-IX is a neutral and independent exchange whose beginnings can be traced back to the early 1990's. On the 29th of December 1997 AMS-IX was established as an Association in Amsterdam, the Netherlands operating under Dutch Law. The AMS-IX provides tunnels to all it's IX members so their members can test and experience IPv6, providing a step up to native connectivity.

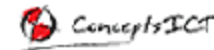


<http://www.ams-ix.net>

Concepts ICT

Concepts ICT

Concepts ICT is an internet service provider founded in 1994 in the Netherlands which provides a full range of internet services for the consumer and business market of about 100k users through the use of dialup, dsl or leased-line connectivity. Concepts ICT provides the enduser and business market with either native or tunneled IPv6 connectivity.



This POP provides /64 tunnels and /48 subnets using 6bone space.

<http://www.concepts-ict.nl>

CyberComm

Cybercomm - Cybercomm Internet Services

Cybercomm B.V. an internet service provider in the Netherlands which provides colocation, dsl, dialup and sharedhosting for the consumer and business market. We also provide Virtual internet service providers with connectivity. Cybercomm will provide the enduser and business user with native or tunneled IPv6 connectivity.



This POP provides /64 tunnels and /48 subnets using RIPE space.

<http://www.cybercomm.nl>

IPng

IPng - Dutch IPv6 Enduser Deployment

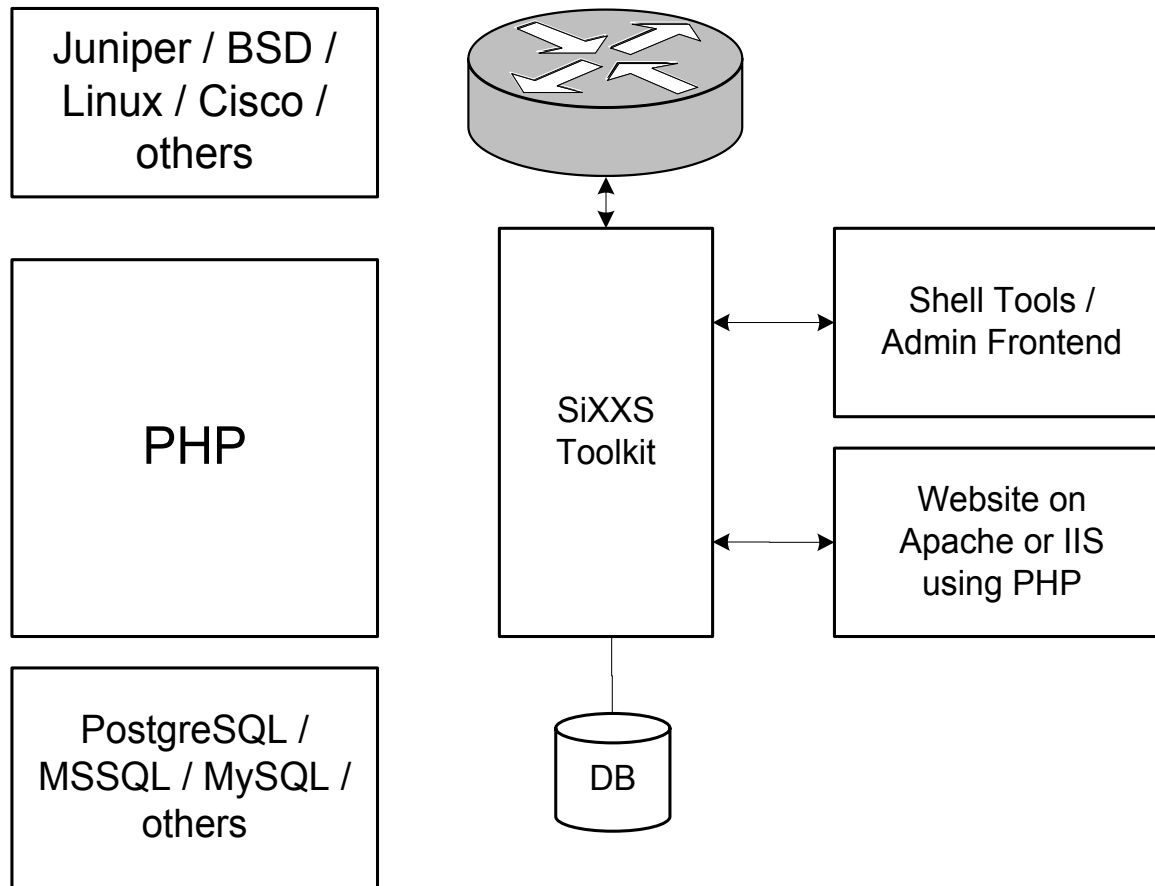
Founded in 1999 by Intouch, IPng provides endusers free IPv6 tunnels along with a subnet allocation on request for non-commercial and/or research purposes. Also, IPng is active in several forums to create a greater understanding of the IPv6 protocol.

This POP provides /127 tunnels and /60 subnets using 6bone space.

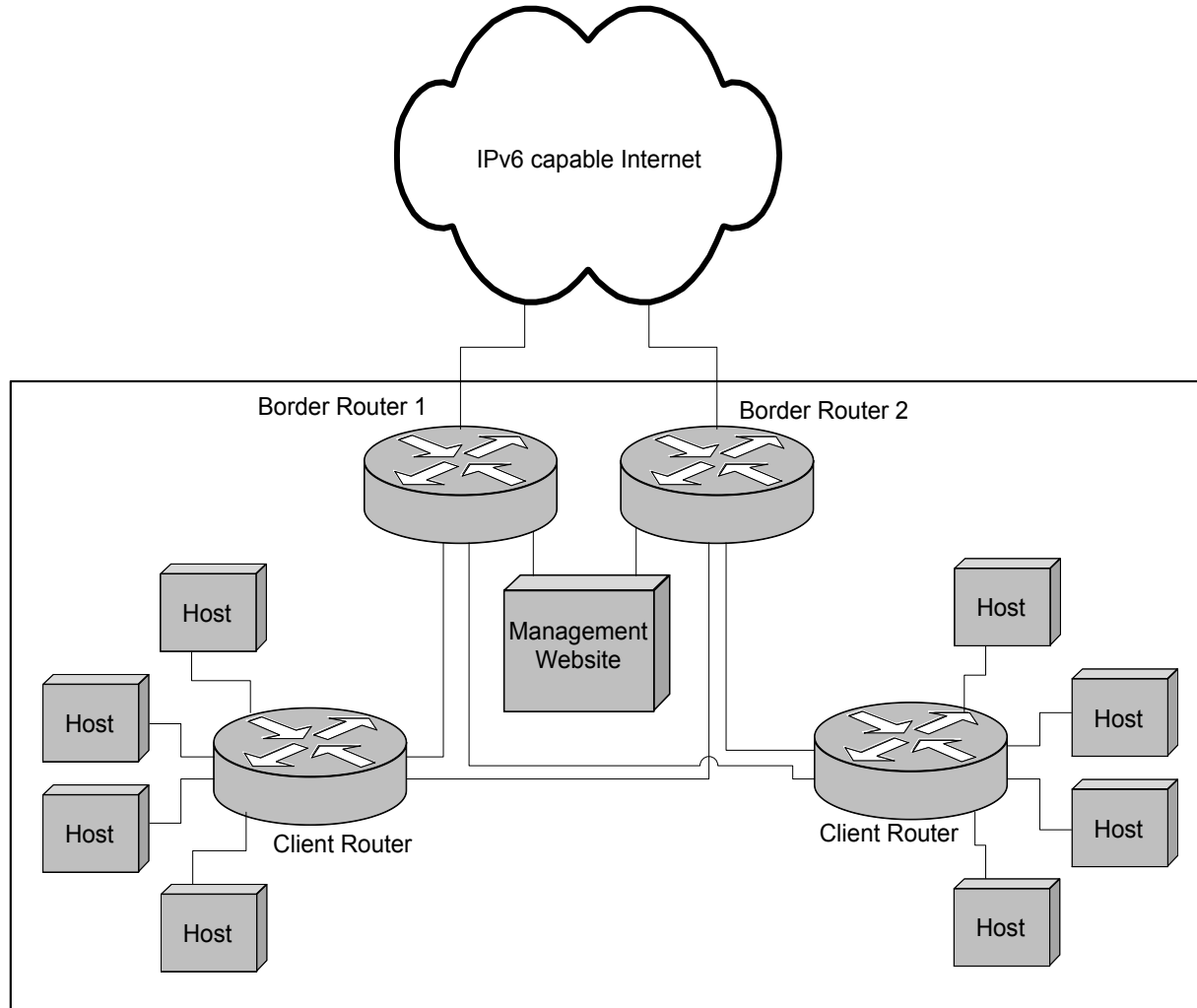
<http://www.ipng.nl>



SixXS Toolkit



Typical network



SixXS Internals



User Signup

User Signup

User Approval

Tunnel Request

Tunnel Approval

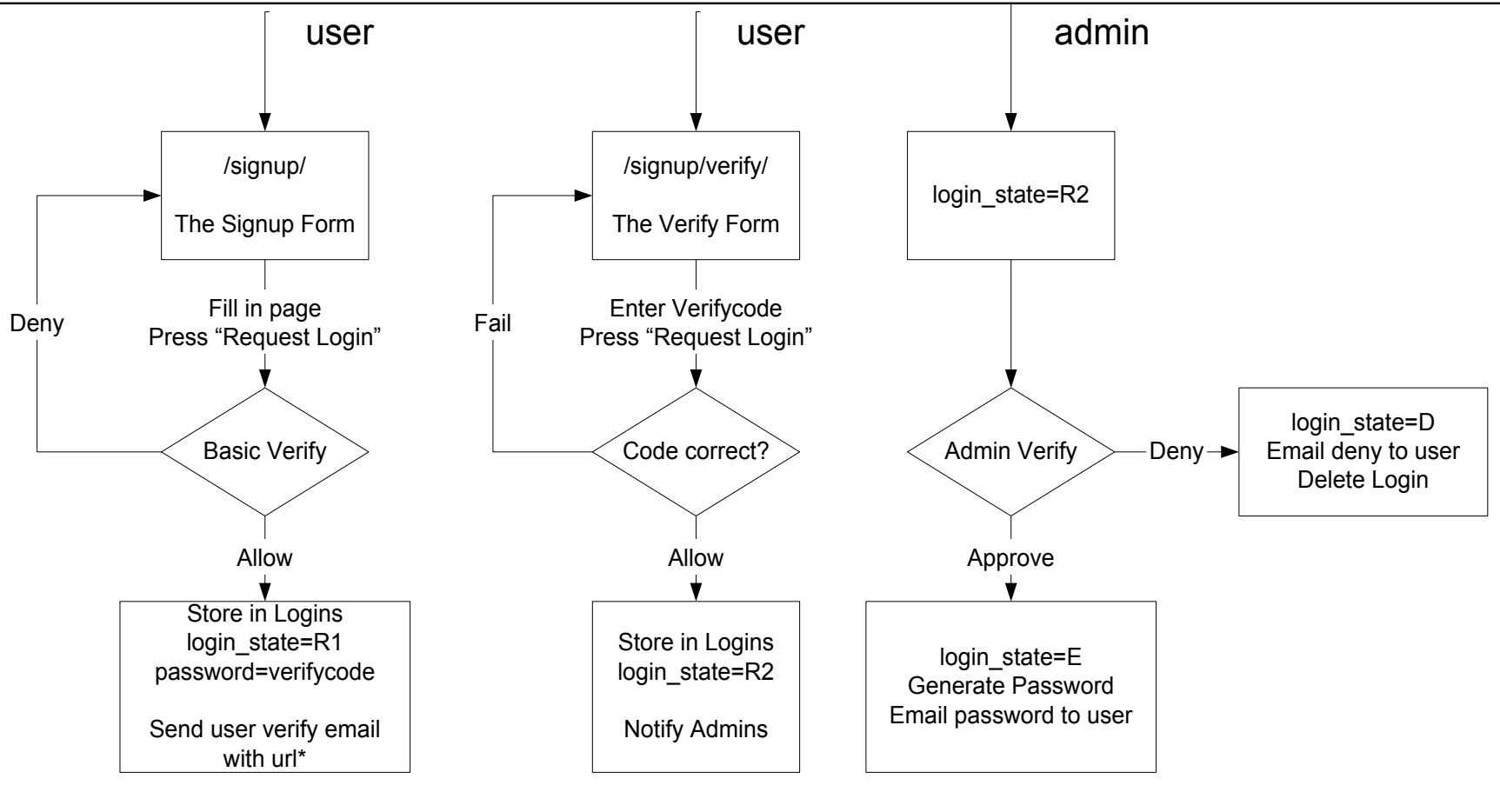
Configure Tunnel by Hand

Enable Tunnel

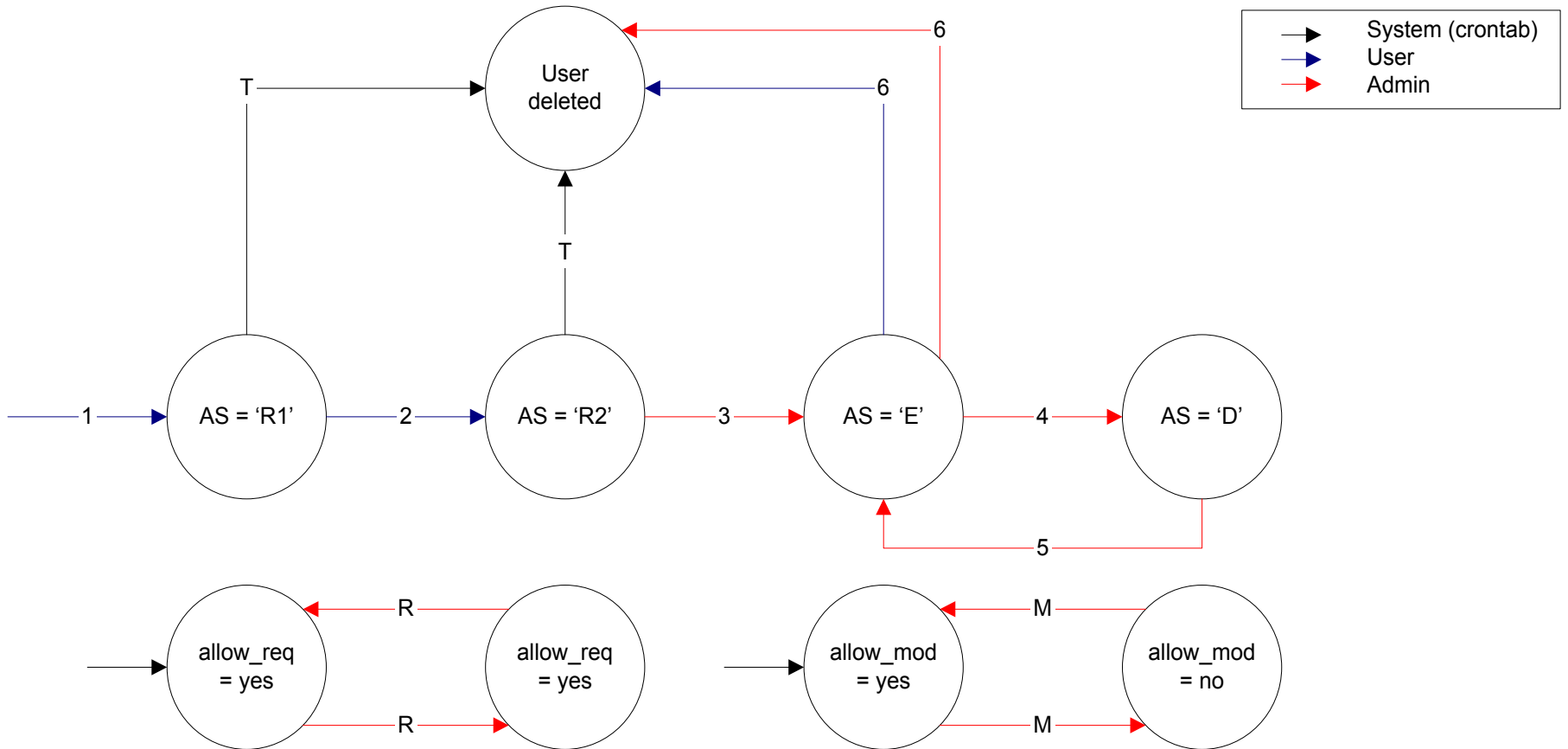
Subnet Request

Subnet Approval

User Signup



User States



User States

AS = Admin State

1	User requests an account (Signup) using nichdl	user->request(nichdl); Whois is fetched, user is sent mail with verify code.
2	User verifies using his/her verifycode	user->verify(nichdl, verifycode); Compare codes, mail admin and user that the request is under admin evaluation.
3	Admin approves this user.	user->approve(nichdl); Password is generated + mailed to user.
4	Admin disables user.	user->disable("Reason"); User gets disabled, user gets mailed with the reason.
5	Admin enables user.	user->enable("Reason"); User gets enabled, user gets mailed with the reason.
6	User or Admin delete user.	user->destroy("Reason"); User + tunnels + all get destroyed, user gets mail with reason.
T	Timeout	user->timeout("Reason"); User request times out, gets mail and gets destroyed.
R	Admin changes Allow_Request	user->allow_request(bool); Changes state so that a user is allowed to request tunnels or not.
M	Admin changes Allow_Mod	user->allow_modify(bool); Changes state so that a user is allowed to modify tunnels or not.

Email: User Request

From: SixXS Staff <info@sixxs.net>
To: Jeroen Massar <jeroen@unfix.org>

Dear Jeroen Massar,

Somebody (probably you) has requested an account with the SixXS project. If you feel that this mail was sent to you without your consent, please reply to this mail at <info@sixxs.net>, and the SixXS Staff will try to figure out what went wrong.

An account has been created for you but you will have to verify that this e-mail address is functional by visiting the URL below. This will ensure that you have read this mail and that your e-mail address is valid. After this happens, the SixXS Staff (Humans!) will verify that the supplied information is indeed correct and manually enable your account. This can take up to 7 days, so please be patient.

To verify your account and hand over this request to the SixXS Staff, please follow this link:
<http://www.sixxs.net/signup/verify/?vcode=f14c7f184bae92cadb3840039ebea009>

If you do not acknowledge this e-mail within 24 hours, the request will be canceled and you will be removed from the database at SixXS.

Regards,
The SixXS tunnelrobot.

SixXS Internals



Email: User Rejection

From: SixXS Staff <info@sixxs.net>
To: Dariusz Sowinski <test@ipng.nl>

Dear Dariusz Sowinski,

The SixXS staff has experienced a problem verifying the account information you specified during your signup (or the information that was extracted from the whois database using the person-object you specified).

The reason specified was:

Free email addresses are not allowed

The result is that your account has been destroyed. If you feel that this is beyond your control, please reply to this message at <info@sixxs.net>. If you reply, please be as complete as possible, paste your person object in the e-mail and tell the staff what you think went wrong.

If you have determined that the error is on your part, kindly fix the situation and then simply re-apply.

**Regards,
The SixXS tunnelrobot.**

SixXS Internals



Email: User Signup Approve

From: SixXS Staff <info@sixxs.net>
To: Jeroen Massar <jeroen@unfix.org>

Dear Jeroen Massar,

You have successfully completed the user registration at SixXS. Your account has been verified and the SixXS Staff have approved the information you have supplied. You can now log in to the website with the following credentials:

Username : JRM1-6BONE
Password : TKvp22B8
Secure URL : <https://www.sixxs.net/home/>

Please try to use a secure web connection whenever logging into the website for maintainance. If this is not possible for some reason, you can also use the non-encrypted version of the site:

Normal URL : <http://www.sixxs.net/home/>

You should change your password on a regular basis (now is a good time to change it). Please look carefully at your information supplied on the website, and change anything that seems out of order. You can contact us <info@sixxs.net> by replying to this email.

Regards,
The SixXS tunnelrobot.

SixXS Internals



Email: User Password Reset

From: SixXS Staff <info@sixxs.net>
To: Jeroen Massar <jeroen@unfix.org>

Dear Jeroen Massar,

Your password has been reset. You can now login again to the website with the following credentials:

Username : JRM1-6BONE
Password : 8Nhd6TdJ
Secure URL : <https://www.sixxs.net/home/>

Please try to use a secure web connection whenever logging into the website for maintainance. If this is not possible for some reason, you can also use the non-encrypted version of the site:

Normal URL : <http://www.sixxs.net/home/>

You should change your password on a regular basis (now is a good time to change it). Please look carefully at your information supplied on the website, and change anything that seems out of order. You can contact us <info@sixxs.net> by replying to this email.

Regards,
The SixXS tunnelrobot.

SixXS Internals



Email: Tunnel Request

From: SixXS Staff <info@sixxs.net>

To: Pim van Pelt <pim@ipng.nl>

Dear Pim van Pelt,

You have requested a tunnel with the SixXS project. The information is:

POP Name : nlbrd01 (nl.concepts [AS12871])

Your IPv4 : 213.136.9.81

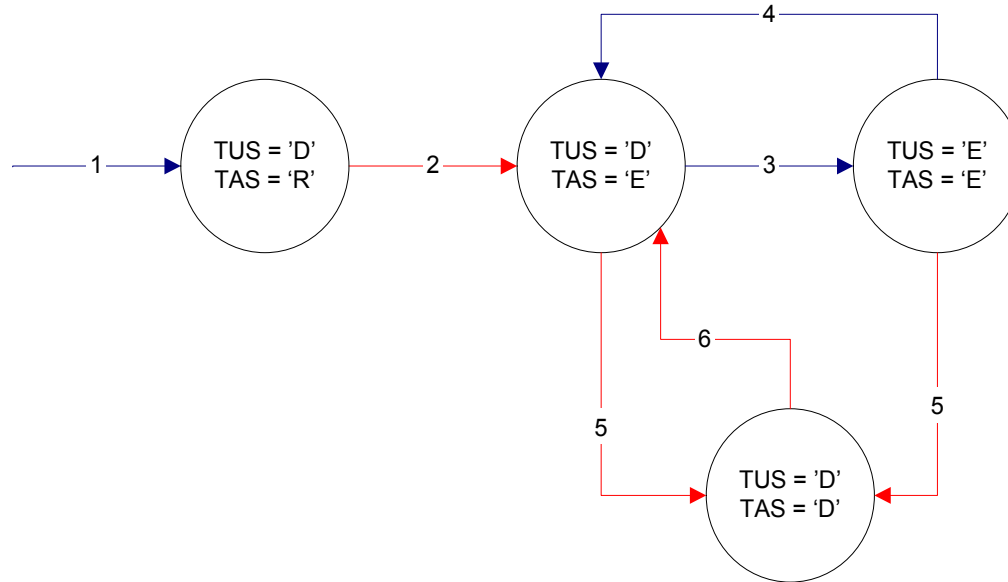
Your Location: Ede, nl

The SixXS admins have been notified of your request and will act upon it shortly.

Regards,

The SixXS tunnelrobot.

Tunnel States



TUS = Tunnel UserState
TAS = Tunnel AdminState

- | | | |
|---|-------------------------------|---|
| 1 | User requests tunnel | <pre>tunnel->request(nichdl, pop_id, ipv4_them, do_sendmail); Add tunnel, notify admin of request, tell user to wait for evaluation.</pre> |
| 2 | Admin approves tunnel request | <pre>tunnel->approve(tun_id); Calculate next free prefix + device, mail user</pre> |
| 3 | User enables tunnel | <pre>tunnel->user_state("enabled");</pre> |
| 4 | User disables tunnel | <pre>tunnel->user_state("disabled");</pre> |
| 5 | Admin disables tunnel | <pre>tunnel->admin_state("enable");</pre> |
| 6 | Admin enables tunnel | <pre>tunnel->admin_state("disable");</pre> |

Email: Tunnel Approval

From: SixXS Staff <info@sixxs.net>
To: Miiro T. Juuso <test@ipng.nl>

Dear Miiro T. Juuso,

The SixXS Staff have honored your request for a tunnel with the following specifications:

POP Name : nlams01 (nl.concepts [AS12871])
Your Location: Rovaniemi, fi
SixXS IPv6 : 3ffe:4007:300:1::1/64
Your IPv6 : 3ffe:4007:300:1::2/64
SixXS IPv4 : 213.197.27.252
Your IPv4 : 212.213.80.139

Please set up this tunnel and make sure you can ping6 the SixXS endpoint within reasonable time (eg, 7 days). We will start monitoring this tunnel as soon as you enable it via the webinterface. We will record any downtime on your side.

Visit your home on the website and enable the tunnel before using it.

Email: Tunnel Rejection

From: SixXS Staff <info@sixxs.net>
To: Mariusz Wozniak <test@ipng.nl>

Dear Mariusz Wozniak,

The SixXS Staff have discussed your request regarding a tunnel but have decided not to approve this request.

The reason specified was:

Latency is too high, it needs to be far below 100ms

If you feel that this tunnel was rejected in error, or want to discuss the reason with the SixXS staff, please reply to this message. Otherwise, no other action is required on your part. Please visit your home on the website for more information and options regarding your account.

**Regards,
The SixXS tunnelrobot.**

SixXS Internals



Email: Subnet Request

From: SixXS Staff <info@sixxs.net>

To: Pim van Pelt <pim@ipng.nl>

Dear Pim van Pelt,

You have requested a tunnel with the SixXS project. The information is:

POP Name : nlbrd01 (nl.concepts [AS12871])

Your IPv4 : 213.136.9.81

Your Location: Ede, nl

The SixXS admins have been notified of your request and will act upon it shortly.

Regards,

The SixXS tunnelrobot.

Email: Subnet Approval

From: SixXS Staff <info@sixxs.net>
To: Stanislaw Kulczycki <test@ipng.nl>

Dear Stanislaw Kulczycki,

The SixXS Staff have honored your request for a subnet on the following tunnel:

**POP Name : nlams02 (nl.intouch [AS8954])
Subnet IPv6 : 3ffe:8114:2000:1400::/60
Routed to : 3ffe:8114:1000::32f/127
Your IPv4 : 217.99.138.67**

No other action is required on your part. Please visit your home on the website for more information and options regarding this tunnel.

**Regards,
The SixXS tunnelrobot.**

Email: Subnet Rejection

From: SixXS Staff <info@sixxs.net>

To: gourdeau sylvia <test@ipng.nl>

Dear gourdeau sylvia,

The SixXS Staff have discussed your request regarding a subnet but have decided not to approve this request.

The reason specified was:

Latency is too high

If you feel that your request was rejected in error, or want to discuss the reason with the SixXS staff, please reply to this message. Otherwise, no other action is required on your part. Please visit your home on the website for more information and options regarding your account.

Regards,

The SixXS tunnelrobot.

SixXS Internals



Credit Plan

Most users will have the following "credit plan":

Action	Cost	Description
Signup	25	
Tunnel Request	-10	
Tunnel Approve	-5	
	10	Can't request a subnet, due to lower bound
Week uptime	5	
	15	Can request a subnet
Subnet Request	-10	
Subnet Approve	-5	
	0	Out of credits, save some more in the coming weeks

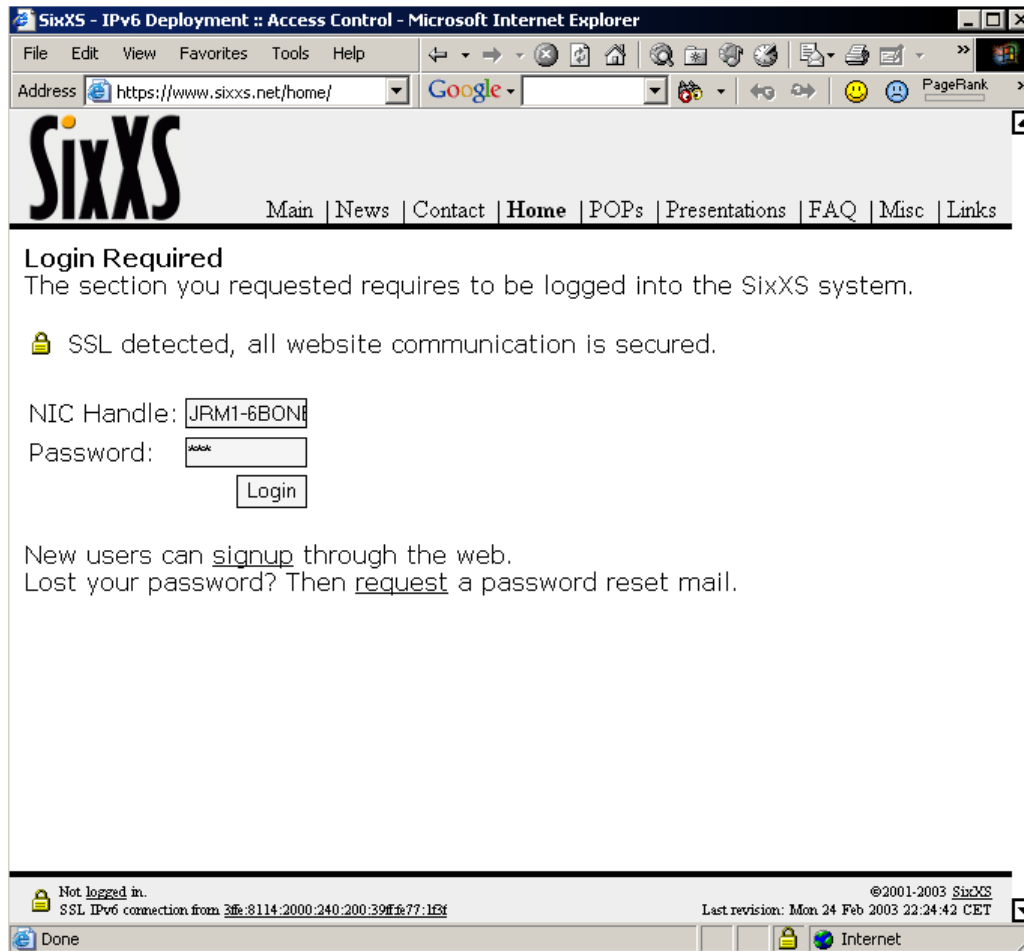
Credit List

The current cost list is:

Action		Cost
Adding a reverse DNS server	debits	1
Approving a subnet request	debits	4
Approving a tunnel request	debits	5
Deleting a subnet	debits	50
Deletion of a tunnel	debits	25
IPv6 endpoint didn't ping for a day	debits	5
IPv6 endpoint didn't ping for a week (autodisable)	debits	50
Moving a tunnel's endpoint	debits	25
Removing a reverse DNS server	debits	1
Requesting a subnet	debits	10
Requesting a tunnel	debits	10
The host pinged yet another week	credits	5

Note that these are the current defaults, each POP can have their own set of costs.

Login



SixXS Internals



User Home

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Home
User info
View log
Request tunnel
Request subnet
Change password
Remove account
Logout

User Home
Welcome Jeroen Massar to your user home where you can manage tunnels, subnets and the related dnsservers.
You currently have 107 [credits](#).
Note: Experimental features are enabled for this account

Tunnels
These are the tunnels which are currently assigned to your handle.

Info	Tunnel to POP	Your IPv4	Your IPv6	State
	Intouch IPng	195.64.92.136	3ffe:8114:1000::27	Enabled

Subnets
These are the subnets which are routed over the tunnels.

Info	Tunnel Endpoint	Subnet Prefix	State
	3ffe:8114:1000::27	3ffe:8114:2000:240::/60	Enabled

Following the link pointed to by the icon in the 'Info' column reveals additional options and information

Logged in as [Jeroen Massar \(JRM1-6B0NE\)](#)
SSL IPv6 connection from [3fe:8114:2000:240:200:39f677:1ef](#)

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Last revision: Mon 24 Feb 2003 22:24:42 CET

User Information (console)

```
noc.sixxs.net - PuTTY
jeroen@noc:~$ sadmin user show JRM1-6BONE f
User Summary for JRM1-6BONE, id 42
-----
Name       : Jeroen Massar <jeroen@unfix.org>
Organisation :
Description :
Address    : Unfix Corp.
            Hofpoldersingel 45
            2807 LW Gouda
            The Netherlands
Country    : Netherlands, The (nl)
Phone Number : +31 182 523024
Homepage   : http://unfix.org
Maintainer : MNT-IPNG
-----
Last login : 2003-02-27 08:47:23
           from : 3ffe:8114:2000:240:200:39ff:fe77:1f3f
Created    : 2001-01-02 19:42:04
Last Modified: 2002-12-21 14:30:15
Credits   : 107
Admin State : E                Administrator : N
Allow Modify : Y              Allow Request : Y
-----
US : User State      AS : Administrative State
E  : Enabled        D  : Disabled
R  : Requested      X  : Delete Requested
-----
TunID  Nichd1      IPv4 Them      POP name      US AS
-----
T19    JRM1-6BONE  195.64.92.136  nlams02       E  E
-----
Route: Route Number      Tun : Tunnel Number
US    : User State      AS  : Administrative State
E     : Enabled        D   : Disabled
R     : Requested      X   : Removal Requested
-----
Route POP      Tun AS US Handle      Prefix
-----
R34 nlams02    T19 E  E JRM1-6BONE  3ffe:8114:2000:240::/60
jeroen@noc:~$
```


User Information

The screenshot shows a Microsoft Internet Explorer browser window titled "SixXS - IPv6 Deployment :: User info - Microsoft Internet Explorer". The address bar displays "https://www.sixxs.net/home/userinfo". The page features the SixXS logo and a navigation menu with links for Main, News, Contact, Home, POPs, Presentations, FAQ, Misc, and Links. A left sidebar contains a menu with icons for Home, User info, View log, Request tunnel, Request subnet, Change password, Remove account, and Logout. The main content area is titled "User info" and contains the following text: "We currently have the following information about you stored in our database:". Below this, user details are listed: NIC Handle: JRM1-6BONE, Full name: Jeroen Massar, Organisation: (blank), Email: jeroen@unfix.org, Address: Unfix Corp., Hofpoldersingel 45, 2807 LW Gouda, The Netherlands, Phone: +31 182 523024, Website: <http://unfix.org>, Created: 2001-01-02 19:42:04, Last Modified: 2002-12-21 14:30:15, Credits: 107 credits, Country: Netherlands, The (nl). A paragraph at the bottom explains that this information is also available through whois from the [6bone whois database](#) and the [SixXS whois database](#), and provides instructions for updating the information. The status bar at the bottom shows "Logged in as Jeroen Massar (JRM1-6BONE)", "SSL IPv6 connection from 3fe:8114:2000:240:200:39ff:577:1ef", "©2001-2003 SixXS", and "Last revision: Mon 24 Feb 2003 22:24:42 CET".

SixXS

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Home
User info
View log
Request tunnel
Request subnet
Change password
Remove account
Logout

User info
We currently have the following information about you stored in our database:

NIC Handle: JRM1-6BONE
Full name: Jeroen Massar
Organisation:
Email: jeroen@unfix.org
Address: Unfix Corp.
Hofpoldersingel 45
2807 LW Gouda
The Netherlands
Phone: +31 182 523024
Website: <http://unfix.org>
Created: 2001-01-02 19:42:04
Last Modified: 2002-12-21 14:30:15
Credits: 107 credits
Country: Netherlands, The (nl)

This information is also available through whois from the [6bone whois database](#) and the [SixXS whois database](#). If you want this information to be updated you should update your handle and notify info@sixxs.net that you have changed the object, after which we will update it in our database.

Logged in as Jeroen Massar (JRM1-6BONE)
SSL IPv6 connection from 3fe:8114:2000:240:200:39ff:577:1ef

©2001-2003 SixXS
Last revision: Mon 24 Feb 2003 22:24:42 CET

Internet

User Log

These are the last 25 rows of your personal log.

Date	Log Entry	*
2003-02-21 01:15:26	Tunnel endpoint 3ffe:8114:1000::27 pinged for 18 weeks	5
2003-02-14 01:15:38	Tunnel endpoint 3ffe:8114:1000::27 pinged for 17 weeks	5
2003-02-12 15:05:46	Login failed, login/password mismatch	
2003-02-12 15:00:24	Login failed, login/password mismatch	
2003-02-12 14:58:37	Login failed, login/password mismatch	
2003-02-12 14:54:25	Login failed, login/password mismatch	
2003-02-07 01:15:32	Tunnel endpoint 3ffe:8114:1000::27 pinged for 16 weeks	5
2003-01-31 01:15:28	Tunnel endpoint 3ffe:8114:1000::27 pinged for 15 weeks	5
2003-01-24 01:15:26	Tunnel endpoint 3ffe:8114:1000::27 pinged for 14 weeks	5
2003-01-20 23:03:03	Login failed, login/password mismatch	
2003-01-17 01:15:22	Tunnel endpoint 3ffe:8114:1000::27 pinged for 13 weeks	5
2003-01-14 12:58:44	Added NS purgatory.unfix.org. to 3ffe:8114:2000:240::/60	-1
2003-01-14 12:58:38	Removed NS purgatory.ipv4.unfix.org. from 3ffe:8114:2000:240::/60	-1
2003-01-10 01:15:12	Tunnel endpoint 3ffe:8114:1000::27 pinged for 12 weeks	5
2003-01-05 15:32:12	Subnet 3ffe:8114:2000:240::/60 was user enabled	
2003-01-05 15:32:11	Subnet 3ffe:8114:2000:240::/60 was user disabled	
2003-01-05 15:29:37	Tunnel to 195.64.92.136 was user enabled.	
2003-01-05 15:29:36	Tunnel to 195.64.92.136 was user disabled.	
2003-01-05 15:29:26	Moved tunnel from 123.123.123.123 to 195.64.92.136	-25
2003-01-05 15:28:26	Moved tunnel from 195.64.92.136 to 123.123.123.123	-25
2003-01-05 15:25:44	Subnet 3ffe:8114:2000:240::/60 was user enabled	
2003-01-05 15:25:43	Subnet 3ffe:8114:2000:240::/60 was user disabled	
2003-01-03 01:15:12	Tunnel endpoint 3ffe:8114:1000::27 pinged for 11 weeks	5
2002-12-27 01:15:14	Tunnel endpoint 3ffe:8114:1000::27 pinged for 10 weeks	5
2002-12-21 14:30:15	The user was updated	

* = Credit change, negative values are costs/penalties, positive values are donations.

View Log (console)

```
noc.sixxs.net - PuTTY
jeroen@noc:~$ sadmin user viewlog JRM1-6BONE
12-21 14:30 The user was updated jeroen 0
12-27 01:15 Tunnel endpoint 3ffe:8114:1000::27 pinged for 10 weeks 5
01-03 01:15 Tunnel endpoint 3ffe:8114:1000::27 pinged for 11 weeks 5
01-05 15:25 Subnet 3ffe:8114:2000:240::/60 was user disabled user 0
01-05 15:25 Subnet 3ffe:8114:2000:240::/60 was user enabled user 0
01-05 15:28 Moved tunnel from 195.64.92.136 to 123.123.123.123 user -25
01-05 15:29 Moved tunnel from 123.123.123.123 to 195.64.92.136 jeroen -25
01-05 15:29 Tunnel to 195.64.92.136 was user disabled. user 0
01-05 15:29 Tunnel to 195.64.92.136 was user enabled. user 0
01-05 15:32 Subnet 3ffe:8114:2000:240::/60 was user disabled user 0
01-05 15:32 Subnet 3ffe:8114:2000:240::/60 was user enabled user 0
01-10 01:15 Tunnel endpoint 3ffe:8114:1000::27 pinged for 12 weeks 5
01-14 12:58 Removed NS purgatory.ipv4.unfix.org. from 3ffe:8114:2000 jeroen -1
01-14 12:58 Added NS purgatory.unfix.org. to 3ffe:8114:2000:240::/60 jeroen -1
01-17 01:15 Tunnel endpoint 3ffe:8114:1000::27 pinged for 13 weeks 5
01-20 23:03 Login failed, login/password mismatch 0
01-24 01:15 Tunnel endpoint 3ffe:8114:1000::27 pinged for 14 weeks 5
01-31 01:15 Tunnel endpoint 3ffe:8114:1000::27 pinged for 15 weeks 5
02-07 01:15 Tunnel endpoint 3ffe:8114:1000::27 pinged for 16 weeks 5
02-12 14:54 Login failed, login/password mismatch 0
02-12 14:58 Login failed, login/password mismatch 0
02-12 15:00 Login failed, login/password mismatch user 0
02-12 15:05 Login failed, login/password mismatch user 0
02-14 01:15 Tunnel endpoint 3ffe:8114:1000::27 pinged for 17 weeks 5
02-21 01:15 Tunnel endpoint 3ffe:8114:1000::27 pinged for 18 weeks 5
jeroen@noc:~$ █
```

Tunnel Information

Tunnel Information

The configuration for this tunnel looks like:

POP Description	Intouch IPng
POP Location	Amsterdam, Netherlands, The 
POP IPv4	212.19.192.219
Your Location	Gouda, Netherlands, The 
Your IPv4	195.64.92.136
IPv6 Prefix	3ffe:8114:1000::26/127
POP IPv6	3ffe:8114:1000::26
Your IPv6	3ffe:8114:1000::27
Last Alive	2003-02-27 08:34:07
Last Dead	2002-10-18 01:15:01
State	Enabled

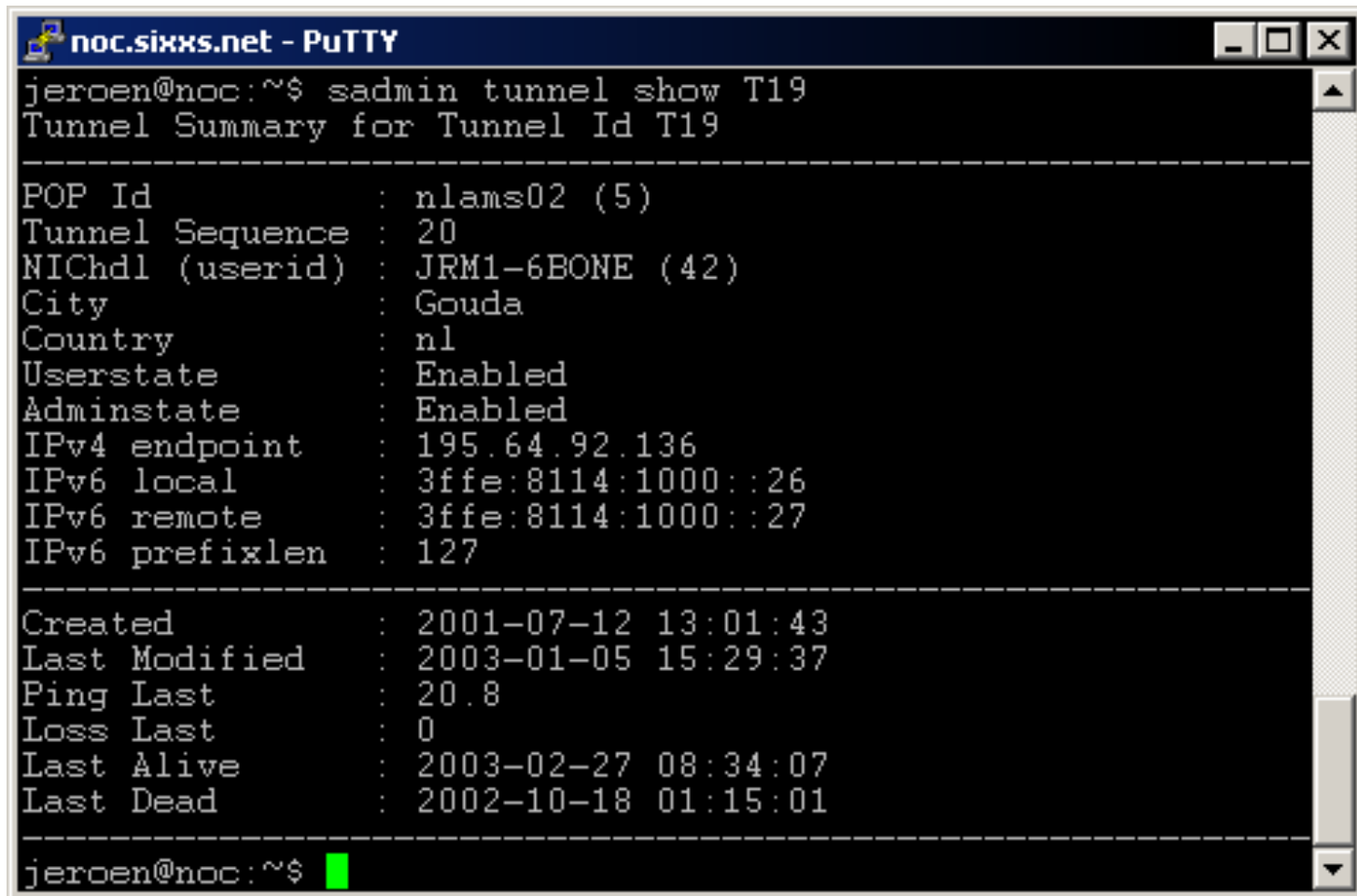
Change IPv4 Endpoint

Disable

Delete

Information on about how to configure the tunnel can be found in our [OS Setup FAQ](#).

Tunnel Information (console)

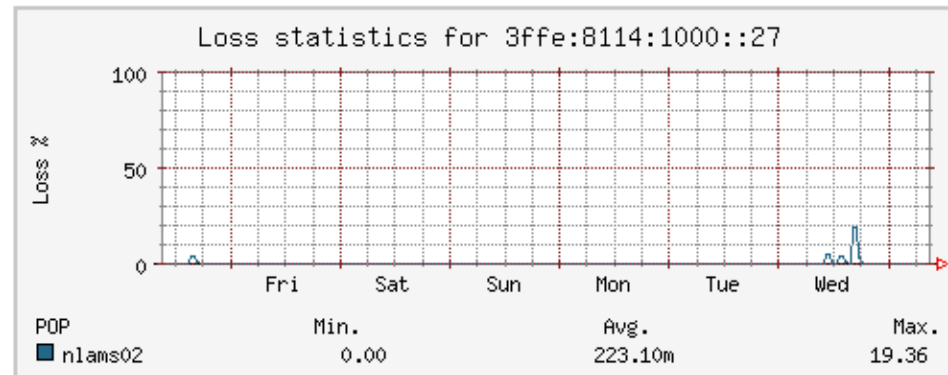
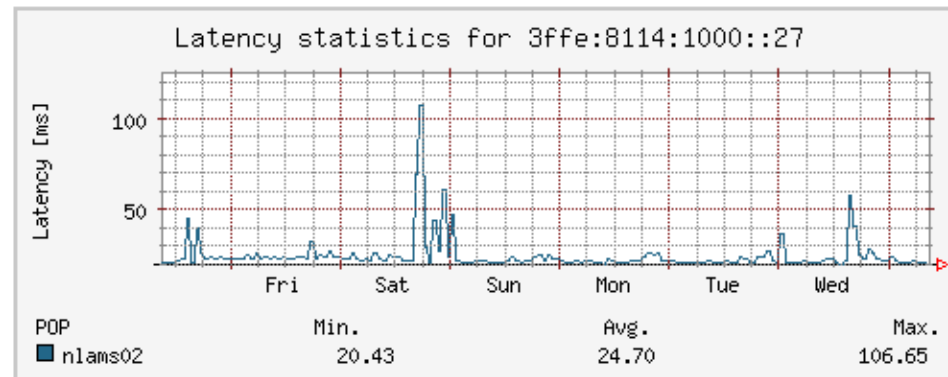


```
noc.sixxs.net - PuTTY
jeroen@noc:~$ sadmin tunnel show T19
Tunnel Summary for Tunnel Id T19
-----
POP Id           : nlams02 (5)
Tunnel Sequence  : 20
NIChdl (userid)  : JRM1-6BONE (42)
City             : Gouda
Country          : nl
Userstate        : Enabled
Adminstate       : Enabled
IPv4 endpoint    : 195.64.92.136
IPv6 local       : 3ffe:8114:1000::26
IPv6 remote      : 3ffe:8114:1000::27
IPv6 prefixlen   : 127
-----
Created          : 2001-07-12 13:01:43
Last Modified    : 2003-01-05 15:29:37
Ping Last       : 20.8
Loss Last        : 0
Last Alive       : 2003-02-27 08:34:07
Last Dead        : 2002-10-18 01:15:01
-----
jeroen@noc:~$ █
```

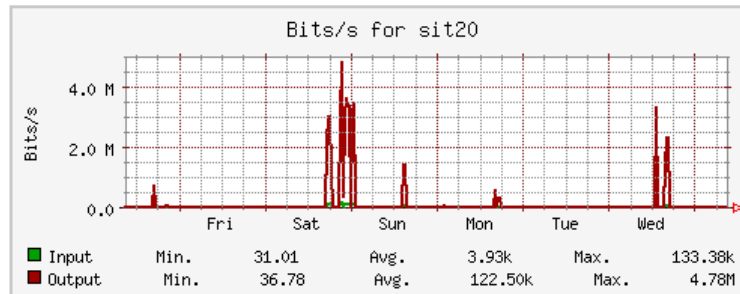
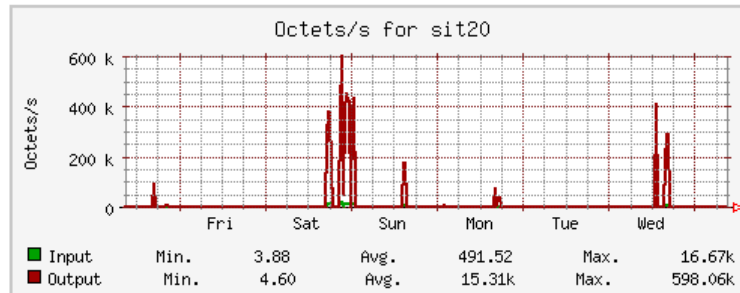
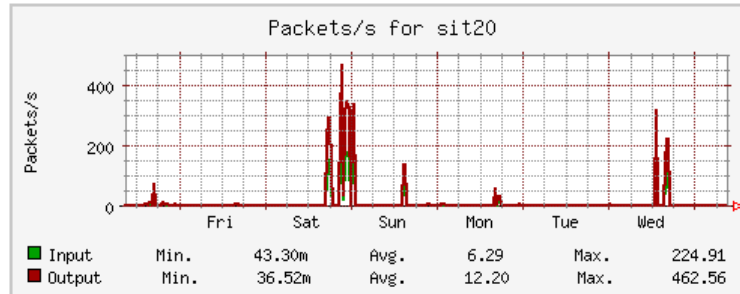
Tunnel Statistics

Tunnel Statistics

Last week 200k (normal)



Traffic Statistics



Subnet Information

SixXS IPv6 Deployment :: Subnet Information - Microsoft Internet Explorer

Address: <https://www.sixxs.net/home/routein/>

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- Request subnet
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- Remove account
- Logout

Subnet Configuration

The configuration for this subnet looks like:

IPv6 Them	3ffe:8114:1000::27
Prefix	3ffe:8114:2000:240::/60
Userstate	Enabled
Created	2002-09-28 23:01:55
Last Modified	2003-01-14 12:58:44

Reverse Delegations

purgatory.unfix.org.

There is a limit of 1 nameserver, you will have to delete a nameserver first if you want to add a new one. See the FAQ item about [Reverse DNS at IPng](#) for an item on how this zone is transferred from your nameserver to the public nameserver.

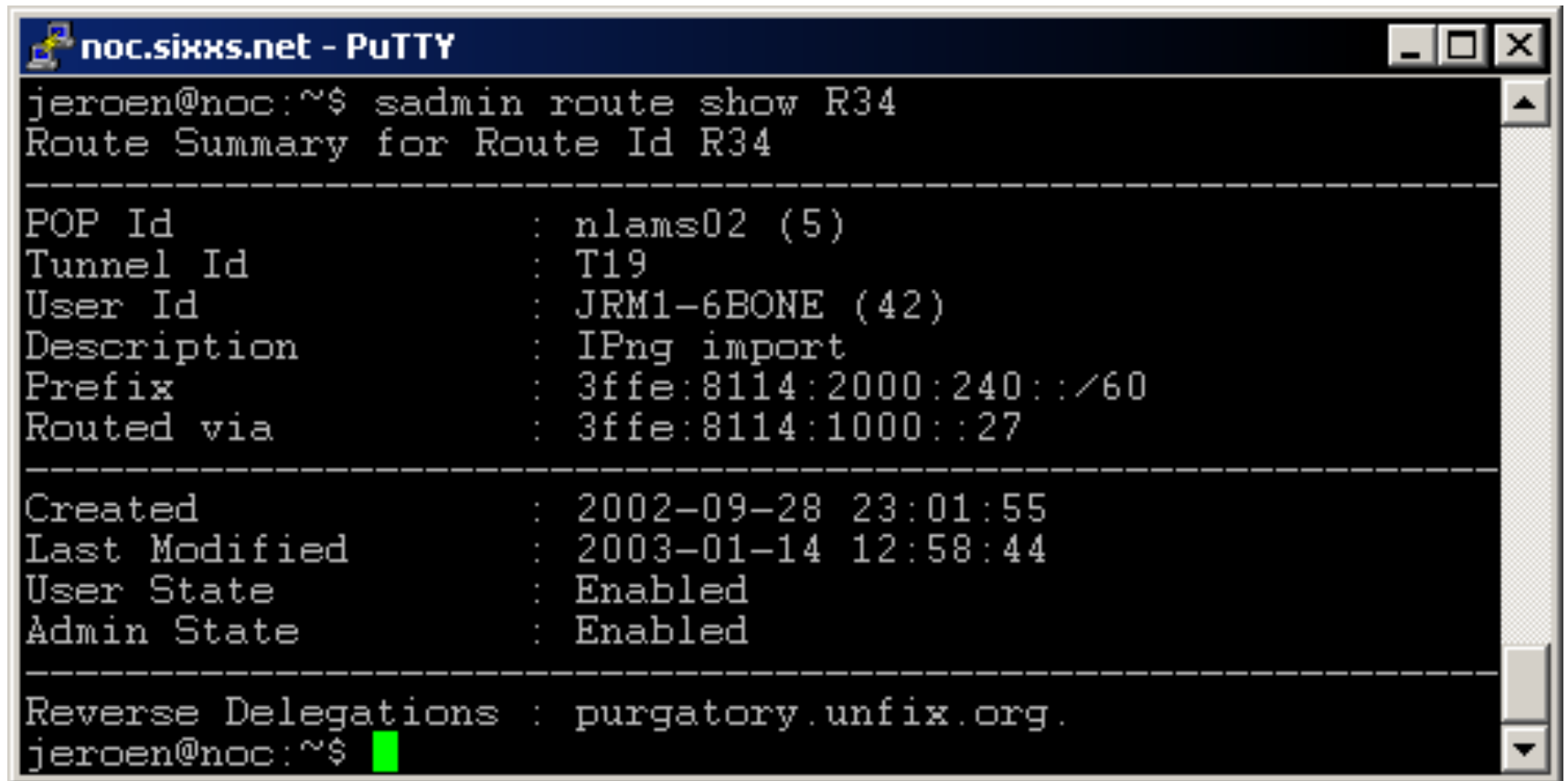
Logged in as [Jeroen Massar \(FRM1-6BONE\)](#) ©2001-2003 SixXS
SSL IPv6 connection from [3ffe:8114:2000:240:200:39ff:fe77:16f](#) Last revision: Mon 24 Feb 2003 22:24:42 CET

Done

SixXS Internals



Route Information (console)



```
noc.sixxs.net - PuTTY
jeroen@noc:~$ sadmin route show R34
Route Summary for Route Id R34
-----
POP Id           : nlams02 (5)
Tunnel Id        : T19
User Id          : JRM1-6BONE (42)
Description      : IPng import
Prefix           : 3ffe:8114:2000:240::/60
Routed via       : 3ffe:8114:1000::27
-----
Created          : 2002-09-28 23:01:55
Last Modified    : 2003-01-14 12:58:44
User State       : Enabled
Admin State      : Enabled
-----
Reverse Delegations : purgatory.unfix.org.
jeroen@noc:~$ █
```

Request Tunnel

SixXS - IPv6 Deployment :: Request tunnel - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <https://www.sixxs.net/home/request> Google

SixXS

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Request tunnel: Endpoint identification (1/3)

With this form you can request a new tunnel to one of the POPs of SixXS.
First you'll need to fill in your IPv4 endpoint address and it's physical location.

IPv4 Endpoint:

City:

Country:

Next step >>

Logged in as [Jeroen Massar \(JRM1-6B0NE\)](#) ©2001-2003 [SixXS](#)
SSL IPv6 connection from [30e:3114:2000:240:39ff:677:1f3f](#) Last revision: Mon 24 Feb 2003 22:24:42 CET

Done Internet

Request Tunnel

SixXS - IPv6 Deployment :: Request tunnel - Microsoft Internet Explorer

Address: <https://www.sixxs.net/home/request>

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Request tunnel: Preferred POP selection (2/3)

The following POP's are available for you, select your preferred one and give a reason why you selected it. See the FAQ item about [Which POP should I choose?](#)

Note: You are choosing a preferred POP, SixXS Staff can easily direct you onto another one when needed, we will notify you in advance in that case. Tunnels are not transferable between POPs.

The latency between the POPs and your endpoint will be measured after you request the tunnel and should not exceed 100ms, if it does your request will be rejected.

Concepts ICT BV (Amsterdam, Netherlands, The) - public
Cybernet Internet Dienstleistungen AG (Muenchen, Germany) - public
Intouch IPng (Amsterdam, Netherlands, The) - public
Cybercomm (Amsterdam, Netherlands, The) - public

Reason:

Logged in as [Jeroen Massar \(JRM1-6BONE\)](#)
SSL IPv6 connection from [3ff:8114:2000:240:200:39ff:677:1ef](#)

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Last revision: Mon 24 Feb 2003 22:24:42 CET

Done

Subnet Request

SixXS - IPv6 Deployment :: Request subnet - Microsoft Internet Explorer

Address: <https://www.sixxs.net/home/request>

SixXS

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- Change password
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Request subnet: Tunnel Selection (1/2)

This form allows you to request a subnet over a certain tunnel. The size of the subnet depends on what the POP administrator has defined.

Select the tunnel towards which you want the subnet to be routed.

Tunnel:

Subnet Description:

Logged in as [Jeroen Massar \(JRM1-6BONE\)](#)
SSL IPv6 connection from [3ffe:8114:2000:240:200:39ff:f677:1ef](#)

©2001-2003 SixXS
Last revision: Mon 24 Feb 2003 22:24:42 CET

Done

SixXS Internals



Change Password

SixXS - IPv6 Deployment :: Change password - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <https://www.sixxs.net/home/passwo> Google

SixXS Main | News | Contact | **Home** | POPs | Presentations | FAQ | Misc | Links

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- Request tunnel
- Request subnet
- Change password**
- Remove account
- Logout

Change password

This form allows you to change your password. You will have to enter your current password and the new password twice for verification. The passwords are stored in MD5 encrypted form. If you lose your password your password can be sent to your email address by using the Mail Password option in the login screen.

Current password:

New password:

Retype new password:

Logged in as [Jeroen Massar \(JRM1-6BONE\)](#)
SSL IPv6 connection from [3ffe:8114:2000:240:200:39ff:677:1ef](#)

©2001-2003 SixXS
Last revision: Mon 24 Feb 2003 22:24:42 CET

Done Internet

SixXS Internals



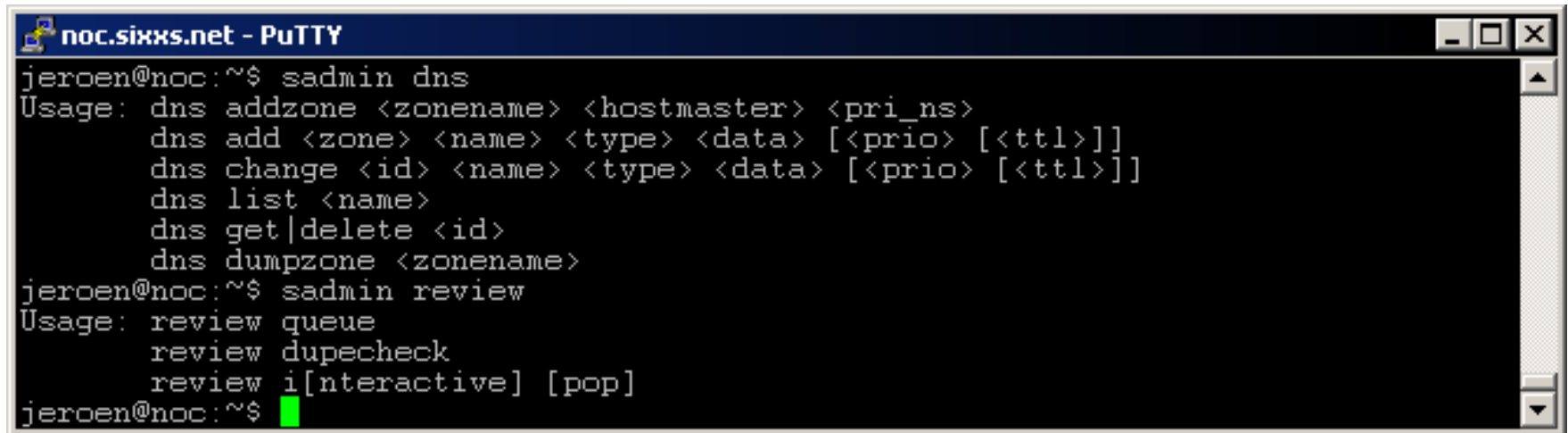
sadmin (SixXS Admin)

```
noc.sixxs.net - PuTTY
jeroen@noc:~$ sadmin
Usage: sadmin {user|tunnel|route|pop|mail|dns|review} {help|args}
jeroen@noc:~$ sadmin user
Usage: user {create|update|delete|verify|approve} NICHDL
user checkwhois NICHDL {report}
user show NICHDL [full]
user viewlog {NICHDL}
user list [{name|email|state|country|maintainer|ip} QUERY [exact]]
user {allowmodify|allowrequest} NICHDL {yes|no}
user setstate NICHDL {enabled|disabled}
user setadmin NICHDL {yes|no}
user setcountry NICHDL COUNTRYID
user setpass NICHDL <password>
user credit NICHDL <integer> [reason]
user log NICHDL MESSAGE
user popright NICHDL POPNAME {A[llow]|D[eny]|R[emove]}
jeroen@noc:~$ sadmin tunnel
Usage: tunnel request NICHDL POPNAME IPV4THEM CITY COUNTRYID
tunnel {delete|show} TUNID
tunnel list [{pop|user|ipv4|ipv6} [exact]]
tunnel move TUNID NEWIPV4THEM
tunnel setstate TUNID {admin|user} {enabled|disabled}
tunnel approve TUNID [POPNAME [POPPREFIXNAME]]
tunnel {showlatency} TUNID
jeroen@noc:~$
```

sadmin

```
noc.sixxs.net - PuTTY
jeroen@noc:~$ sadmin route
Usage: route request TUNID DESCRIPTION
       route {delete|show} ROUTEID
       route list [{pop|user|prefix|tunnel} QUERY exact]
       route setstate ROUTEID {admin|user} {enabled|disabled}
       route approve ROUTEID [POPPREFIXNAME]
       route {delegate|undelegate} ROUTEID NAMESERVER
jeroen@noc:~$ sadmin pop
Usage: pop create PARAMS
       pop {show|dumpconfig} POPNAME [POPPREFIX]
       pop setenabled POPNAME {yes|no}
       pop setprivate POPNAME {yes|no}
       pop setnote POPNAME FILENAME
       pop list [POPNAME]
       pop addprefix [POPNAME] [NAME] [T|S] [PREFIX] [LEN] [ALLOCLen] [DESC]
       pop find [POPNAME] [devicenum]
       pop makedns [POPNAME] [POPPREFIX] [int|arpa|forward] [LIMIT]
jeroen@noc:~$ sadmin mail
Usage: mail user {request|verify|approve|resetpass} NICHDL
       mail user {reject|delete} NICHDL [reason]
       mail tunnel {approve|downtime|autodisable} TUNNELID
       mail tunnel {request|reject|delete} TUNNELID [reason]
       mail route {request|approve} ROUTEID
       mail route {reject|delete} ROUTEID [reason]
jeroen@noc:~$
```

sadmin



```
noc.sixxs.net - PuTTY
jeroen@noc:~$ sadmin dns
Usage: dns addzone <zonename> <hostmaster> <pri_ns>
       dns add <zone> <name> <type> <data> [<prio> [<ttd>]]
       dns change <id> <name> <type> <data> [<prio> [<ttd>]]
       dns list <name>
       dns get|delete <id>
       dns dumpzone <zonename>
jeroen@noc:~$ sadmin review
Usage: review queue
       review dupecheck
       review i[nteractive] [pop]
jeroen@noc:~$
```


Finding users

```
noc.sixxs.net - PuTTY
jeroen@noc:~$ sadmin user list name jeroen
AS: Admin State  E: Enabled    D: Disabled
                  R1:Requested  R2:Verified  R:Rejected
-----
Handle           Full Name                AS      Credits
-----
JRM1-RIPE       Jeroen Massar            E        260
JG5-6BONE       Jeroen Geusebroek        E        157
JRM1-6BONE       Jeroen Massar            E        107
JW4-6BONE       Jeroen Wellner           E        100
JH10-6BONE      Jeroen Johannes Anna W   E        140
JW6245-RIPE     Jeroen Wolff             E        291
BJA1-6BONE      Bastiaan Jeroen Arnold   E        140
ROEN1-6BONE     Jeroen LH van Gennip     E         13
This matched 8 users
jeroen@noc:~$
```

POP sync

- **# SixXS POP dump generated on 2003-02-24 15:16:46**
- **# POP configuration**
- **pop_name nlams03**
- **pop_ipv4 193.194.136.70**
- **pop_ipv6 3ffe:3000::**
- **pop_subnetprefix 3ffe:3000::/24**
- **pop_tunnelprefix 3ffe:30ff:a1ad::/48**
- **pop_tunneldevice gif**
- **pop OK**

POP sync

Tunnel configuration

Currently there are 10 tunnels.

Syntax of the 6in4 command is:

**# 6in4 <devicesequence> <ipv6_us> <ipv6_them> <ipv4_us> <ipv4_them> {up|disabled|down}
<heartbeat_password>**

handle DW5715-RIPE - Dirk-Jan Wemmers - dirkjan@capcave.com

6in4 6 3ffe:30ff:a1ad:c5::1 3ffe:30ff:a1ad:c5::2 64 193.194.136.70 217.198.192.109 enabled

handle IRA3-RIPE - Infonet Ripe Admin-c - ripe-admin-c@infonet-europe.net

6in4 7 3ffe:30ff:a1ad:c6::1 3ffe:30ff:a1ad:c6::2 64 193.194.136.70 195.206.64.244 enabled

handle JW6245-RIPE - Jeroen Wolff - jwolff@enertel.nl

6in4 1 3ffe:30ff:a1ad:c0::1 3ffe:30ff:a1ad:c0::2 64 193.194.136.70 213.218.66.10 enabled

handle MAS74-RIPE - Maurice A. Sienema - sienema@io.nl

6in4 10 3ffe:30ff:a1ad:c9::1 3ffe:30ff:a1ad:c9::2 64 193.194.136.70 81.17.46.242 enabled

handle NMR1-RIPE - Niels Raijer - niels@nl.demon.net

6in4 4 3ffe:30ff:a1ad:c3::1 3ffe:30ff:a1ad:c3::2 64 193.194.136.70 195.11.244.60 enabled

POP sync

Routes

Currently there are 10 routes.

Syntax of the route command is:

route <prefix/prefixlen> <nexthop> {up|disabled|down}

handle DW5715-RIPE - Dirk-Jan Wemmers - dirkjan@capcave.com

route 3ffe:30c5::/32 3ffe:30ff:a1ad:c5::2 up

handle IRA3-RIPE - Infonet Ripe Admin-c - ripe-admin-c@infonet-europe.net

route 3ffe:30c6::/32 3ffe:30ff:a1ad:c6::2 up

handle JW6245-RIPE - Jeroen Wolff - jwolff@enertel.nl

route 3ffe:30c0::/32 3ffe:30ff:a1ad:c0::2 up

handle MAS74-RIPE - Maurice A. Sienema - sienema@io.nl

route 3ffe:30c9::/32 3ffe:30ff:a1ad:c9::2 up

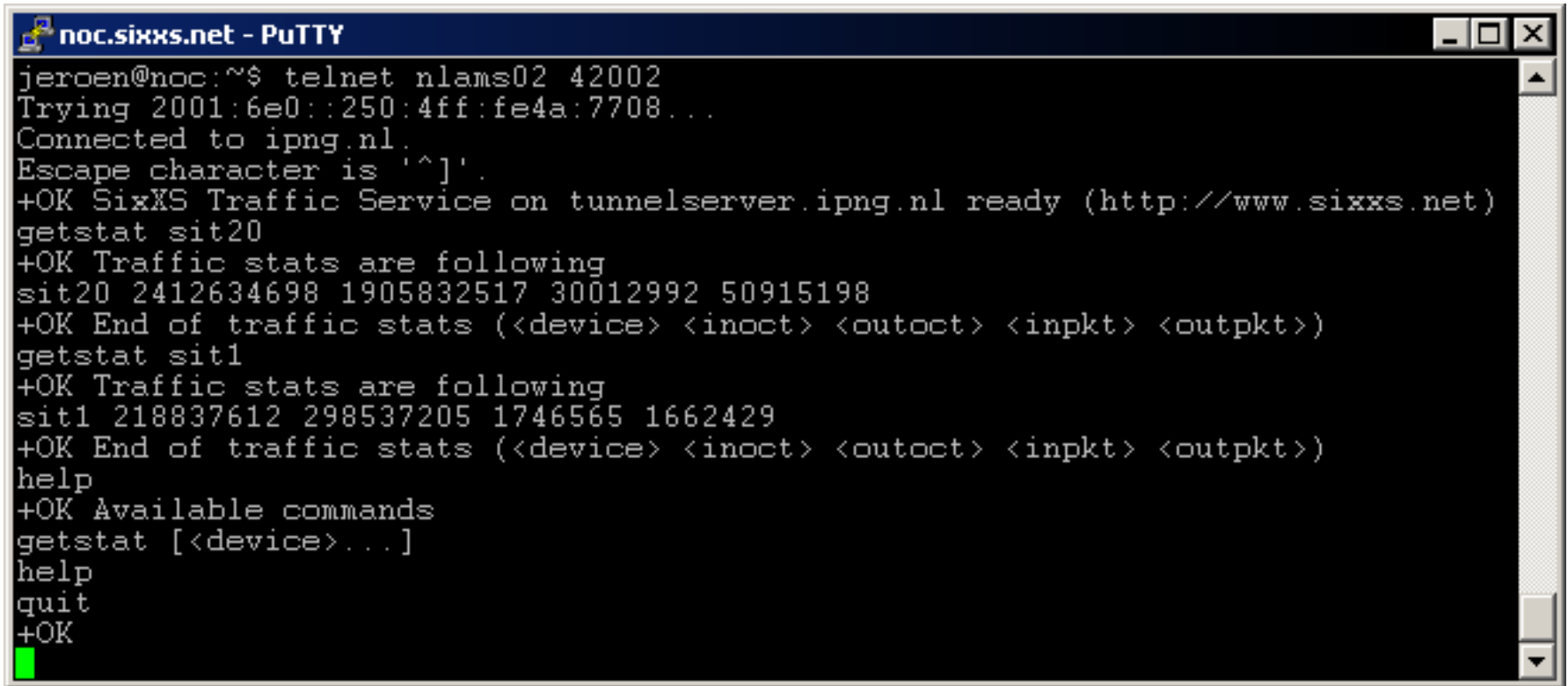
handle NMR1-RIPE - Niels Raijer - niels@nl.demon.net

route 3ffe:30c3::/32 3ffe:30ff:a1ad:c3::2 up

Latency Checks

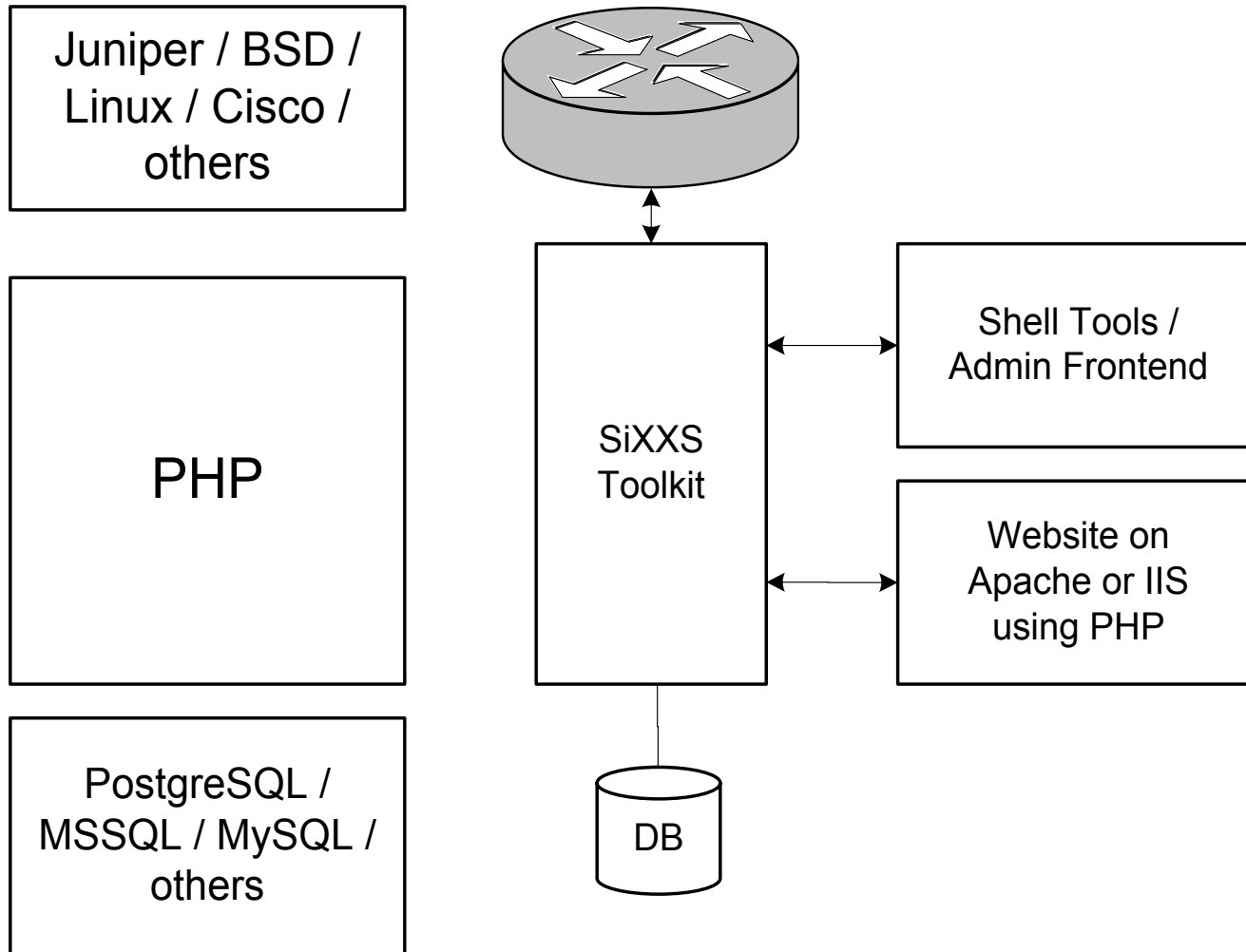
```
noc.sixxs.net - PuTTY
jeroen@noc:~$ telnet nlams02 42001
Trying 2001:6e0::250:4ff:fe4a:7708...
Connected to ipng.nl.
Escape character is '^]'.
+OK SixXS Ping Service on tunnelserver.ipng.nl ready (http://www.sixxs.net)
ping6 3ffe:8114:1000::20 3ffe:8114:1000::4424 3ffe:8114:1000::1
+OK Sending 20 packets of size 56 ICMPv6 messages
3ffe:8114:1000::20 20 20 0% 0.35 0.38 0.51
3ffe:8114:1000::4424 0 0 0% -1 -1 -1
3ffe:8114:1000::1 20 20 0% 11.2 22.6 31.8
+OK I'm done pinging (<ipaddress> <xmt> <rcv> <loss>% <min> <avg> <max>)
help
+OK Available commands
ping4 <host> [...<host>]
ping6 <host> [...<host>]
count <number of pings>
size <size of the packet>
help
quit
+OK
```

Traffic Service



```
noc.sixxs.net - PuTTY
jeroen@noc:~$ telnet nlams02 42002
Trying 2001:6e0::250:4ff:fe4a:7708...
Connected to ipng.nl.
Escape character is '^]'.
+OK SixXS Traffic Service on tunnelserver.ipng.nl ready (http://www.sixxs.net)
getstat sit20
+OK Traffic stats are following
sit20 2412634698 1905832517 30012992 50915198
+OK End of traffic stats (<device> <inoct> <outoct> <inpkt> <outpkt>)
getstat sit1
+OK Traffic stats are following
sit1 218837612 298537205 1746565 1662429
+OK End of traffic stats (<device> <inoct> <outoct> <inpkt> <outpkt>)
help
+OK Available commands
getstat [<device>...]
help
quit
+OK
```

SixXS Toolkit (repeat)







































SixXS Internals


































Users

The 691 users span 36 countries.

Users	Percentage	Country	Users	Percentage	Country
276	39.94%	 Netherlands, The	4	00.58%	 Switzerland
96	13.89%	 Germany	2	00.29%	 Indonesia
74	10.71%	 Poland	2	00.29%	 Latvia
39	05.64%	 France	2	00.29%	 New Zealand
37	05.35%	 Italy	1	00.14%	 Australia
22	03.18%	 Belgium	1	00.14%	 China
22	03.18%	 Finland	1	00.14%	 Czech Republic
20	02.89%	 Hungary	1	00.14%	 Estonia
13	01.88%	 Sweden	1	00.14%	 Greece
11	01.59%	 Slovenia	1	00.14%	 Iceland
10	01.45%	 United Kingdom	1	00.14%	 Israel
10	01.45%	 United States	1	00.14%	 Luxembourg
9	01.30%	 Norway	1	00.14%	 Malaysia
6	00.87%	 Austria	1	00.14%	 Malta
6	00.87%	 Denmark	1	00.14%	 Portugal
5	00.72%	 Canada	1	00.14%	 Russia
4	00.58%	 Ireland	1	00.14%	 Senegal
4	00.58%	 Spain	1	00.14%	 Venezuela





































Tunnels

The 638 tunnels span 31 countries.

Tunnels	Percentage	Country	Tunnels	Percentage	Country
272	42.63%	 Netherlands, The	3	00.47%	 Switzerland
81	12.70%	 Germany	2	00.31%	 Ireland
65	10.19%	 Poland	2	00.31%	 New Zealand
38	05.96%	 France	2	00.31%	 Spain
31	04.86%	 Italy	1	00.16%	 Czech Republic
25	03.92%	 Finland	1	00.16%	 Estonia
20	03.13%	 Belgium	1	00.16%	 Iceland
19	02.98%	 Hungary	1	00.16%	 Israel
14	02.19%	 Sweden	1	00.16%	 Latvia
12	01.88%	 United Kingdom	1	00.16%	 Luxembourg
10	01.57%	 Norway	1	00.16%	 Malta
9	01.41%	 Slovenia	1	00.16%	 Portugal
6	00.94%	 Austria	1	00.16%	 Russia
6	00.94%	 Denmark	1	00.16%	 Senegal
6	00.94%	 United States	1	00.16%	 Venezuela
4	00.63%	 Canada			

Wealth

The 34784 credits span 36 countries.

Credits	Percentage	Country	Credits	Percentage	Country
22210	63.85%	 Netherlands, The	112	00.32%	 Switzerland
2849	08.19%	 Germany	109	00.31%	 Ireland
2405	06.91%	 France	38	00.11%	 Indonesia
1631	04.69%	 Poland	38	00.11%	 Israel
865	02.49%	 Hungary	35	00.10%	 Spain
798	02.29%	 Belgium	30	00.09%	 New Zealand
745	02.14%	 Sweden	25	00.07%	 Australia
576	01.66%	 United Kingdom	25	00.07%	 Malaysia
453	01.30%	 Finland	20	00.06%	 Greece
273	00.78%	 United States	18	00.05%	 Senegal
246	00.71%	 Austria	15	00.04%	 Venezuela
245	00.70%	 Denmark	13	00.04%	 Malta
220	00.63%	 Norway	9	00.03%	 Canada
203	00.58%	 Italy	6	00.02%	 Estonia
143	00.41%	 Czech Republic	5	00.01%	 Portugal
140	00.40%	 Luxembourg	0	00.00%	 China
134	00.39%	 Iceland	0	00.00%	 Latvia
133	00.38%	 Russia	-8	-0.02%	 Slovenia

Questions?

<http://www.sixxs.net>

Jeroen Massar

JRM1-RIPE

jeroen@unfix.org / jeroen@sixxs.net

SixXS Internals

