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Abstract: Deliverable D3.3.16 is produced when almost Euro6IX network infrastructure is up and running and services are maintained in a stable way. Last month a list of these services has been published. From now to the end of the project, this list will be updated. The main goal of these documents is to report Euro6IX networks status, deployment stage and usage by internal activities as well as public events.
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Keywords: Euro6IX, IPv6, Network Maps, Network Reports, Network Status, MRTG, Services, Statistics, Traffic.
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Revision History

The following table describes the main changes done in the document since its creation.

Revision	Date	Description	Author (Organization)
v0.1	04/08/2003	Document creation and Addition of Stat6 graphics	Aurora Ferrándiz (TID) Jesús López (TID)
v1.0	05/08/2003	Addition of updated Services List and Euro6IX Web Access Statistics	Aurora Ferrándiz (TID)
v1.1	06/08/2003	Comments on MRTG Statistics	Antonio Lucientes (TID)
v1.2	31/08/2003	Final review	Jordi Palet (Consulintel)

Executive Summary

D3.3.16 deliverable has been produced in the context of activities A3.1 and A3.2.

Activity A3.1 covers the deployment of the local networks attached to the different Euro6IX IXs nodes. Activity A3.2 deals with all deployments related to Euro6IX Backbone network.

Deliverables D3.3.x are being produced every month, and this document corresponds to month number 16 (April 2003).

As a first approach, the structure of these network usage reports is the following:

- First section (Current Network Status) is intended to clarify which links have been already deployed and which concrete networks have been attached.
- Second section (Network Stability and Global Traffic Reports) is intended to show the reachability of all network sections as well as a global view of the total traffic exchanged in Euro6IX network.
- Third section (Detailed Network and Services Usage in Events/Trials) is intended to show and analyze the traffic produced in some internal trials and in all public events where Euro6IX contributes in any way.

Table of Contents

1. Introduction.....	6
2. Current Network Status.....	7
2.1 Remarkable News Related to Euro6IX Network & Services.....	7
2.2 Status of International Links	7
3. Network Stability and Global Traffic Reports.....	8
3.1 Hosts/Networks Reachability Statistics from TID	8
3.2 Links Traffic Measurement Statistics	11
3.3 Euro6IX Servers List and Stability Statistics	11
3.4 Euro6IX Web Server Statistics.....	15
4. Detailed Network and Services Usage in Events/Trials.....	17
5. Summary and Conclusions	18

Table of Figures

Figure 2-1:	<i>Planned Euro6IX International Links as of April 2003</i>	<i>7</i>
Figure 3-1:	<i>Euro6IX IXs LOSS Measured from TID Premises in April 2003.....</i>	<i>9</i>
Figure 3-2:	<i>Euro6IX IXs DELAY Measured from TID Premises in April 2003.....</i>	<i>10</i>
Figure 3-3:	<i>Monthly Graph, IPv6 Traffic, TID to Euro6IX (April 2003)</i>	<i>11</i>
Figure 3-4:	<i>Web Usage Summary this Month and Last 12 Months</i>	<i>15</i>
Figure 3-5:	<i>Monthly Statistics for April 2003</i>	<i>15</i>
Figure 3-6:	<i>Web Daily Usage for April 2003.....</i>	<i>16</i>
Figure 3-7:	<i>Web Hourly Usage for April 2003.....</i>	<i>16</i>

1. INTRODUCTION

Euro6IX network monthly reports are intended to show network and services evolution, current status, stability and usage.

Since D3.3.15 (March 2003 Network Monthly Report), an updated list of stable services per partner will be included in this document.

Only stable and operational services are listed, since there are other lists for specific trials/tests within A4.1, A4.2 & A4.3 including also unstable services.

2. CURRENT NETWORK STATUS

This section is intended to update and clarify which links have been already deployed and which concrete networks have been attached to Euro6IX backbone.

2.1 Remarkable News Related to Euro6IX Network & Services

In this period (April 2003, M16) the relevant news include:

- **TOR6IX-ZUR6IX.** Same as in March 2003: Physical connection Up & Running thanks to a link provided by Swisscom/Fixnet. It stills need some configuration to be IPv6 reachable.
- **LIS6IX and TOR6IX** have implemented and configured the Routing policy agreed in WP2. This policy is necessary to keep Euro6IX traffic within Euro6IX links and establish useful peerings with external networks (such as 6NET, ABILENE, etc).

2.2 Status of International Links

The updated status of the links is as follows:

- **LIS6IX-MAD6IX:** Up and running.
- **MAD6IX-LON6IX:** Up and running.
- **LON6IX-PAR6IX:** Up and running.
- **PAR6IX-BER6IX:** Up and running.
- **BER6IX-TOR6IX:** Up and running.
- **TOR6IX-ZUR6IX:** Up and running.
- **TOR6IX-MAD6IX:** It was decided to use a tunnel to enable routing tests depending on a ring topology. Not configured yet.

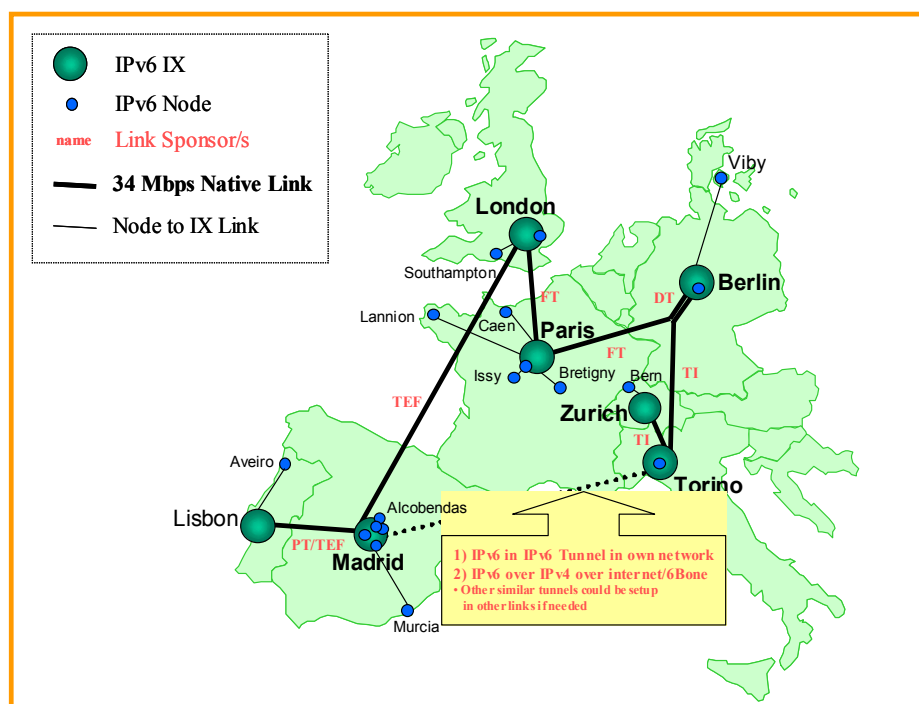


Figure 2-1: Planned Euro6IX International Links as of April 2003

3. NETWORK STABILITY AND GLOBAL TRAFFIC REPORTS

The following subsections show the global statistics systems that have been identified as necessary to characterize the Euro6IX network stability and usage each month.

3.1 Hosts/Networks Reachability Statistics from TID

The “ping_stat” tool, or simply “stat6”, automatically generates these statistics from TID premises (<http://stat6.tid.euro6ix.org/>). This system allows through the WEB interface to display any day or month graphic on demand.

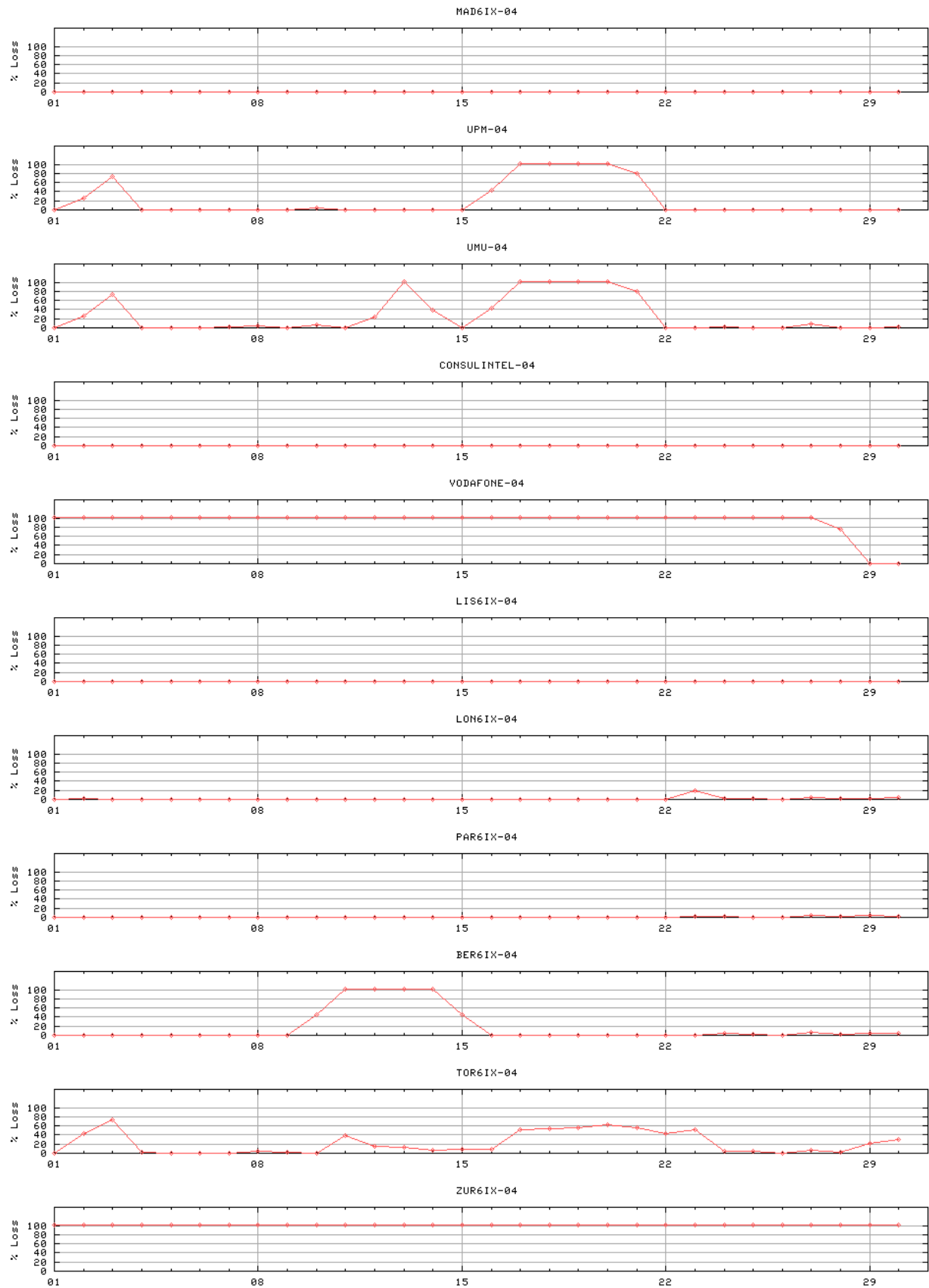


Figure 3-1: Euro6IX IXs LOSS Measured from TID Premises in April 2003

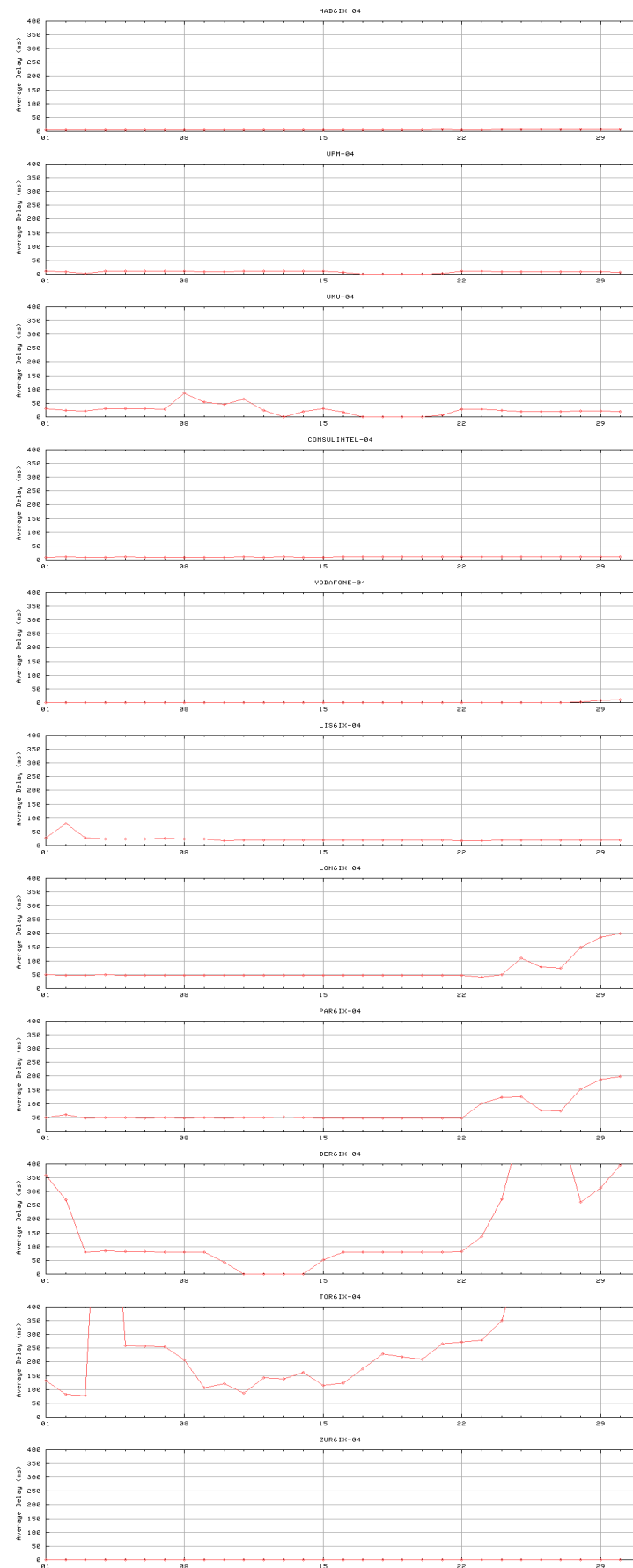


Figure 3-2: Euro6IX IXs DELAY Measured from TID Premises in April 2003

3.2 Links Traffic Measurement Statistics

Until today, only an IPv4 MRTG tool has been installed in TID premises. When nGn porting of MRTG to IPv6 is ready more partners will install it obtaining useful link traffic statistics.

Although MRTG IPv4 is used at TID, it measures only IPv6 traffic since it is configured to show all ATM interface throughputs and there is no IPv4 traffic on those ATM PVCs.

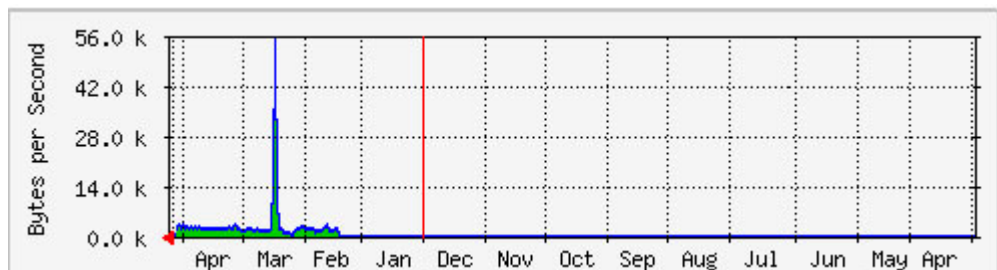


Figure 3-3: Monthly Graph, IPv6 Traffic, TID to Euro6IX (April 2003)

As seen in the graphics above, there is about 4 Kbytes/s traffic from TID to Euro6IX and vice-versa (symmetric. Blue = TID to Euro6IX, Green = Euro6IX to TID) due to some M6Bone tests. There is a little bit more traffic due to the increment of internal test users at TID.

3.3 Euro6IX Servers List and Stability Statistics

This section is an updated list (end of April 2003) of the stable services running in Euro6IX network.

BT

Server	URL IPv6	URL IPv4	Recommended Client
Web	http://www.uk6x.com/	http://www.uk6x.com/	IPv6 Web Browser
Looking Glass	https://lg.ipv6.btexact.com/		IPv6 Web Browser
Quake 1 and Quake 2	quake.ipv6.btexact.com		Quake
Video Streaming	http://vod.ipv6.btexact.com		VLC
MP3 Streaming	http://radio.ipv6.btexact.com:8000/		Winamp (http://www.uk6x.com/applicationservices/radio.m3u) Windows Media 9 (http://www.uk6x.com/applicationservices/radio.asx) mpeg123 for Unix Systems xmms for Unix and Linux Systems Freeamp, now called zinf is a multimedia player for Linux or Windows systems. It has been tested under Linux and Windows 2000/XP.

		VLC
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Consulintel

Server	URL IPv6	URL IPv4	Recommended Client
Euro6IX Official Web	www.euro6ix.com www.euro6ix.org www.euro6ix.net		IPv6 Web Browser
Web Site Statistics	http://www.consulintel.euro6ix.net/_private_euro6ix/statistics/statistics.htm		IPv6 Web Browser
Project Repository	ftp://ftp.euro6ix.org		IPv6 Web Browser
Web Mail Tool	http://webmail.novagnet.euro6ix.org/		IPv6 Web Browser
Video Streaming	mms://6stream.consulintel.euro6ix.com/		Windows Media 9
DNSSec	https://pki.umu.euro6ix.org		IPv6 Web Browser

FTRD

Server	URL IPv6	URL IPv4	Recommended Client
Webcam	webcam.ftrd.euro6ix.org		
Proxy Web	proxy.ftrd.euro6ix.org		
Quake2	quake2.ftrd.euro6ix.org		Quake
Teg	teg.ftrd.euro6ix.org (not running yet)		

nGn

Server	URL IPv6	URL IPv4	Recommended Client
MRTG	www.euro6ix.org		IPv6 Web Browser
Project Repository	ftp://ftp.euro6ix.org		IPv6 Web Browser
Web Mail Tool	http://webmail.novagnet.euro6ix.org/		IPv6 Web Browser

PTIN

Server	URL IPv6	URL IPv4	Recommended Client
Web	http://www.ptin.euro6ix.com		IPv6 Web Browser
Chat/IRC	irc.ptin.euro6ix.com irc.ptin.euro6ix.org irc.ptin.euro6ix.net		IPv6 Chat Client
Jabber	jabber.ptin.euro6ix.com jabber.ptin.euro6ix.org jabber.ptin.euro6ix.net		
Quake 1 and Quake2	quake.ptin.euro6ix.com quake.ptin.euro6ix.org quake.ptin.euro6ix.net		Quake

MP3 Streaming	mp3server.ptin.euro6ix.com mp3server.ptin.euro6ix.org mp3server.ptin.euro6ix.net		
Video Streaming	vic.ptin.euro6ix.com vic.ptin.euro6ix.org vic.ptin.euro6ix.net		Vic
6to4	6to4.ptinovacao.pt		

T-Nova

Server	URL IPv6	URL IPv4	Recommended Client	Notes
Chat/IRC	irc.t-nova.euro6ix.org		IPv6 Chat Client	
NTP	ntp.t-nova.euro6ix.org		NTP Client/ntpd	
Video Streaming	video.t-nova.euro6ix.org		Windows Media 9	
Tunnel Broker	http://tb.ipv6.berkom.de		Web Browser	

Telscom

Server	URL IPv6	URL IPv4	Recommended Client
Web	http://www.telscom.ch		
Video Streaming	http://dsv6.telscom.ch:8100/mediaplayer6.html rtsp://dss6.ipv6.telscom.ch		WindowsMedia MPEG4IP

TID

Server	URL IPv6	URL IPv4	Recommended Client
Looking Glass	http://lg.tid.euro6ix.com		IPv6 Web Browser
Web Statistics Tool	http://stat6.tid.euro6ix.com		IPv6 Web Browser
Topaz	Running at: not running yet		
Chat/IRC	irc6.tid.euro6ix.com		Chat IPv6 Client
Video Streaming	vod.tid.euro6ix.com:9999		VLC
Free Radius IPv6	Running at: mortadelo6.tid.euro6ix.com:4444		
Digital TV Multicast	dtv.tid.euro6ix.com:1234		
Access to a Multimedia IPv4 Portal through a	http://cba.tid.es	http://cba.tid.es	IPv6 Web Browser

Server	URL IPv6	URL IPv4	Recommended Client
NAT-PT			

TILAB

Server	URL IPv6	URL IPv4	Recommended Client
Web	http://www.ngnet.it		
Chat/IRC	irc6.ngnet.it		IPv6 Chat Client
News	news6.ngnet.it		IPv6 News Client
Mail for IPv6 Users	http://mail.ngnet.it/e/		IPv6 Web Browser (mail server available from Web)
Jabber	jabber.ngnet.it		
Quake 1 and Quake 2	games.ngnet.it		Quake
Tunnel Broker	http://tb.ngnet.it/		

UMU

Server	URL IPv6	URL IPv4	Recommended Client
Web	www.umu.euro6ix.org		IPv6 Web Browser
Looking Glass	http://www.umu.euro6ix.org/cgi-bin/router-wan/ntools.pl http://www.umu.euro6ix.org/cgi-bin/router-lan/ntools.pl		IPv6 Web Browser
Nagios	http://nagios.umu.euro6ix.org/nagios/		IPv6 Web Browser
Chat/IRC	http://www.uc3m.ist-long.com/irc/		IPv6 Chat Client
VPN Enforcement Tool	https://shire.umu.euro6ix.org		IPv6 Web Browser
PKIv6	https://pki.umu.euro6ix.org		IPv6 Web Browser
DNSSEC	https://pki.umu.euro6ix.org		IPv6 Web Browser
PMTv6	https://shire.umu.euro6ix.org/pmttool		

UoS

Server	URL IPv6	URL IPv4	Recommended Client
Surge Radio	http://surge.ecs.soton.ac.uk:8090		

UPM

Server	URL IPv6	URL IPv4	Recommended Client
Web	http://www.upm.euro6ix.org		
Looking Glass	http://www.upm.euro6ix.org/cgi-	http://wamba.dit.upm.es	IPv6 Web Browser

	bin/looking-glass-upm-v0.6/ntools.pl		
Chat/IRC	irc.upm.euro6ix.org:7000		IPv6 Chat Client (i.e. xchat)
Quake 1 and Quake 2	quake2.upm.ist-long.com		
DNSSec	https://pki.umu.euro6ix.org		

Vodafone

Server	URL IPv6	URL IPv4	Recommended Client
Web	www.vodafone.euro6ix.org		IPv6 Web Browser

TID Euro6IX Statistics Service (“Stat6”) will show in the future the availability of some relevant or public Euro6IX IPv6 servers listed above (to be included also in <http://stat6.tid.euro6ix.org>).

3.4 Euro6IX Web Server Statistics

This section contains the statistics related to IPv6 accesses to Euro6IX official WEB page, that are already being logged in advance to the start of the project, so it can be processed and displayed at any time.

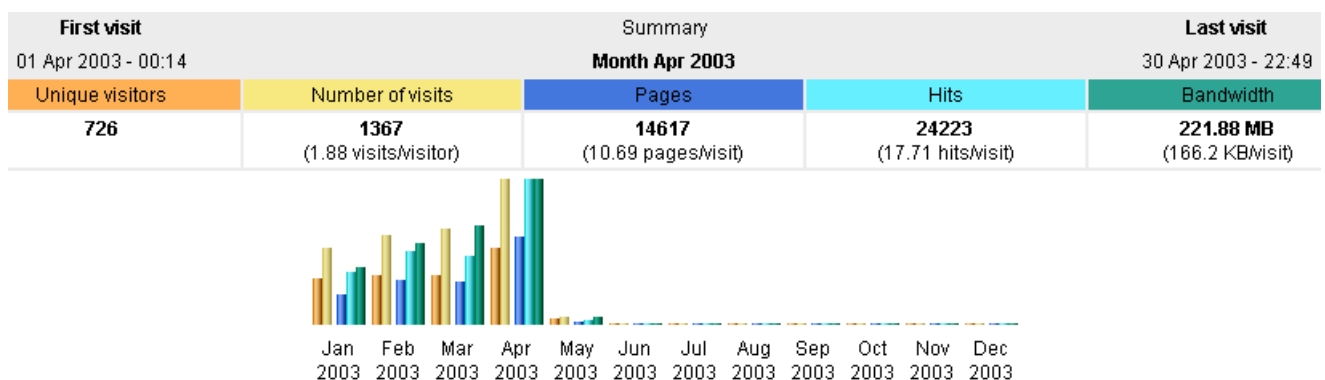


Figure 3-4: Web Usage Summary this Month and Last 12 Months

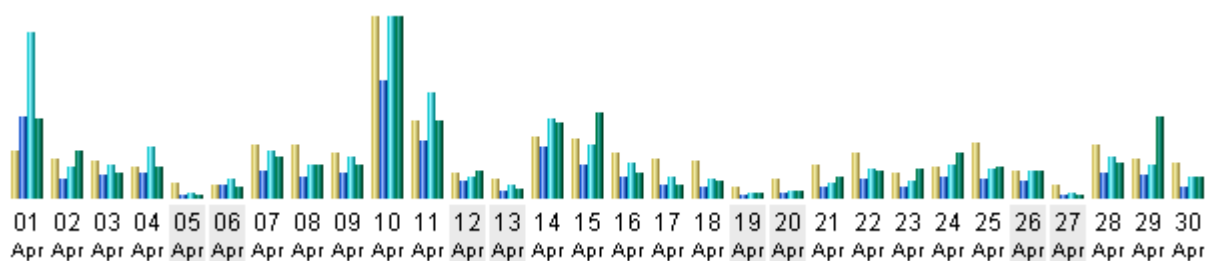


Figure 3-5: Monthly Statistics for April 2003

Day	Number of visits	Pages	Hits	Bandwidth
01 Apr 2003	50	1605	3274	15.49 MB
02 Apr 2003	43	399	628	9.05 MB
03 Apr 2003	39	449	644	4.77 MB
04 Apr 2003	33	498	1014	6.17 MB
05 Apr 2003	16	48	91	536.86 KB
06 Apr 2003	15	274	364	2.10 MB
07 Apr 2003	58	553	939	8.13 MB
08 Apr 2003	58	417	676	6.22 MB
09 Apr 2003	48	483	803	6.47 MB
10 Apr 2003	195	2335	3593	34.95 MB
11 Apr 2003	84	1136	2103	15.11 MB
12 Apr 2003	27	328	427	5.23 MB
13 Apr 2003	21	129	260	1.89 MB
14 Apr 2003	67	1022	1585	14.48 MB
15 Apr 2003	64	675	1077	16.62 MB
16 Apr 2003	49	416	718	4.96 MB
17 Apr 2003	43	243	416	2.70 MB
18 Apr 2003	41	235	373	3.16 MB
19 Apr 2003	12	56	98	882.58 KB
20 Apr 2003	21	80	128	1.24 MB
21 Apr 2003	35	204	304	4.27 MB
22 Apr 2003	49	374	577	5.17 MB
23 Apr 2003	26	223	352	5.69 MB
24 Apr 2003	33	426	659	8.58 MB
25 Apr 2003	59	394	593	5.98 MB
26 Apr 2003	30	347	530	5.06 MB
27 Apr 2003	14	62	98	499.96 KB
28 Apr 2003	57	497	822	6.71 MB
29 Apr 2003	43	470	662	15.55 MB
30 Apr 2003	37	239	415	4.24 MB
Average	45.57	487.23	807.43	7.40 MB
Total	1367	14617	24223	221.88 MB

Figure 3-6: Web Daily Usage for April 2003

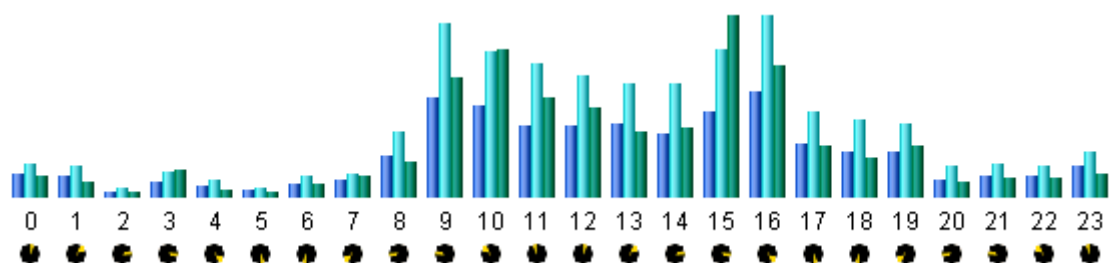


Figure 3-7: Web Hourly Usage for April 2003

4. DETAILED NETWORK AND SERVICES USAGE IN EVENTS/TRIALS

This section is intended to study and analyze the network traffic generated in the following situations:

- **Internal Trials:** Internal Euro6IX trials performed in the context of activity A4.3 will generate traffic within the Euro6IX networks. In some of these trials, the detailed study and analysis of the traffic generated could be interesting. In such cases, particular diagrams and statistics will be shown in this section although they could be included in the general statistics showed in previous sections.
- **Public Events:** After a public event has been performed, the traffic processed by the network during it must be studied and analyzed. The study must be focused in the traffic obtained as a result of this concrete event.

During April 2003 there was no relevant events with the participation of Euro6IX.

5. SUMMARY AND CONCLUSIONS

Since March, a list of services is being included in these reports. Keeping on this line, next network monthly reports will include an update list of services running in Euro6IX network.

That means that WP3 is now focusing in stable services deployed in an operational manner throughout Euro6IX network.

Next steps within WP3 include not only to request a list of installed services to the partners but also to coordinate this deployment to reach two main objectives:

- A correct deployment of Euro6IX own services: As soon as A4.1 and A4.2 updates the list of stable network and end-user services, WP3 will study this feed-back and will talk and discuss with all partners who are going to install them. At least 3 or more partners would be interesting to have a minimum testing.
- A correct geographical distribution of IPv6 stable services: With this measurement all partners will be involved in a more equal manner in project experiments and demonstrations. Also traffic among exchanges will be more balanced improving routing experiments.

After these two objectives are achieved, WP3 will focus on the introduction of beta-testers access test-beds (Real users).