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Ubuntu Lucid Lynx Release and IPv6 stats

ubuntu 



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About this document

This document gives some insight in the usage of the Ubuntu mirror located in the Netherlands, hosted by BIT B.V. (<http://www.bit.nl/>) in Ede. This mirror has been running for several years now, and we have made some statistics before, but not this extensive.

This document is in no way directly or officially related to Ubuntu or Canonical. It gives **some** insight into **a part of** the Ubuntu userbase.

Regarding the privacy part of statistics; We've collected the following information (please see below for hostnames and the period on/in which we have collected this):

- IP addresses of anyone who connected to one of the mentioned hostnames
- UserAgent used by the client that connected
- Ubuntu-version encountered while 'apt-get updating'
- Ubuntu-version encountered while downloading an ISO file

The information was gathered from webserver- and torrenttrackerlogs on the following hostnames:

- nl.archive.ubuntu.com
- nl.releases.ubuntu.com
- IPv6 connections towards *.releases.ubuntu.com where the IPv4 part points towards Canonical, London, UK
- ipv6.torrent.ubuntu.com

The period in which this information is gathered starts:

April 22'th, 09:28:40 CEST

and ends:

May 10'th, 09:27:35 CEST

All information gathered will be deleted as soon as this document is published.



nl.archive.ubuntu.com

nl.archive.ubuntu.com is the official mirror for Ubuntu-users from the Netherlands. So we can expect the majority of the Dutch users to use this mirror.

The data is based upon the accesslog of this vhost. If a file that matched REGEX “`^/ubuntu/dists/([^-]+)/`” was downloaded, we would store:

- the IP that downloaded that file
- the useragent used to download that file

We did not store IP <-> Version combinations we had already seen, to avoid too many updates in the database. But new combinations are relevant, as you can see further on.

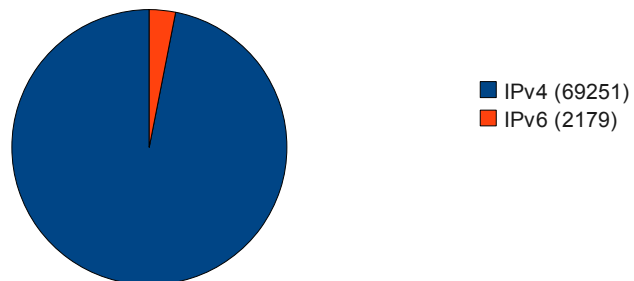
Basic visitor stats

Unique number of IP's seen on nl.archive.ubuntu.com

We have seen in total:

- Unique IPv4-addresses: 69251 (96.94%)
- Unique IPv6-addresses: 2179 (3.06%)

IPv4 and IPv6

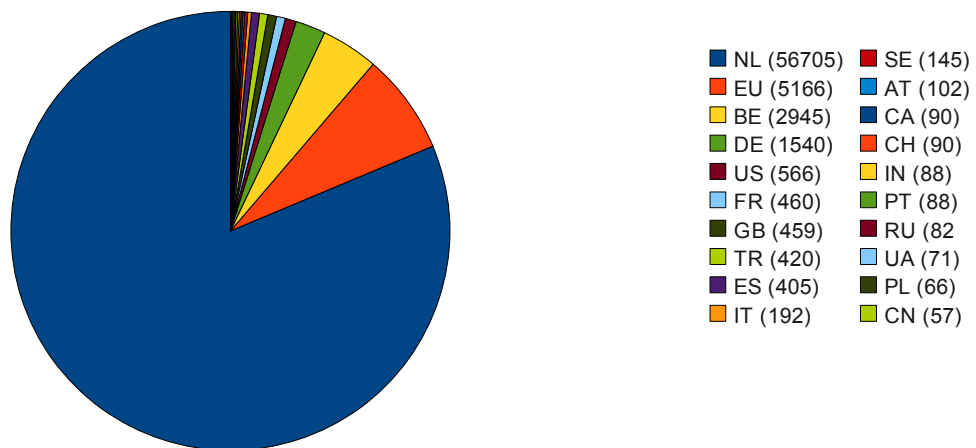


Source countries

We can also see from which countries the visitors came. It's no surprise to see NL topping that list. Just as it is supposed to be.

Countries seen on nl.archive.ubuntu.com

Top 20



An interesting fifth place is the US. Which isn't really local for us. It seems that most of these IP's are search engines. (We should consider adding a `/robots.txt` :)). Another cause for the US to be on the fifth place can be found in the next part, IPv6.



IPv6

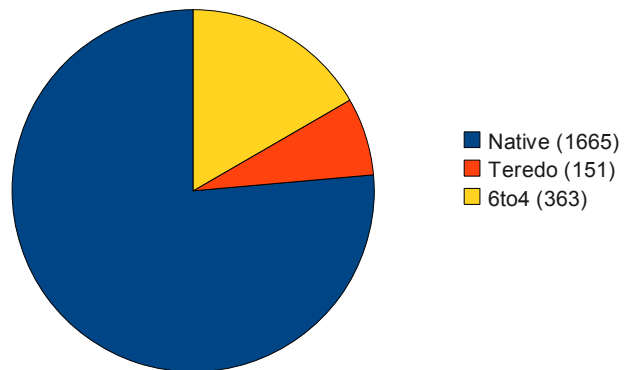
IPv6 is a very important issue for BIT. We (and several others) have been trying to convince Canonical to officially support IPv6 for a few years now, resulting in an IPv6 enabled releases mirror, and IPv6 enabled torrents. We'll get there, eventually. ;)

Statistics show that there aren't many IPv6-enabled users at all (unfortunately). However there are around 2000 IPv6-connected users in the Netherlands and using their IPv6-addresses we can determine the 'type' of IPv6-connectivity used (Teredo, 6to4 or native IPv6).

Now, this is cool! Most people are connected through native IPv6. As can be expected, most other users are using 6to4. Teredo really doesn't seem to be that popular with Linux users. Probably because Teredo will not provide you with a static IPv6 address, but 6to4 will.

So, how native is 'native'? Let's have a look at the (top 10) originating AS'es for the seen IPv6 addresses.

Types of IPv6 seen on nl.archive.ubuntu.com



Rank	AS number	AS description	Number of addresses
1	AS1103	Surfnet, NL	515
2	Unknown	Teredo and 6to4	514
3	AS3265	XS4All, NL	290
4	AS12859	BIT BV, NL	263
5	AS16265	Leaseweb BV, NL	123
6	AS6939	Hurricane Electric, USA	90
7	AS35470	XL-IS BV, NL	73
8	AS12871	Concepts ICT BV, NL	40
9	AS12989	Highwinds Network Group, Officially USA, actually NL	38
10	AS47869	Netrouting, NL	20

There is a pattern here. Numbers 2, 4, 5, 8 and 9 are known SixXS¹-pops. AS3265 is known to offer IPv6 tunnels to their customers, and AS6939 is one of the largest tunnelbrokers on the globe. Also, AS6939 causes 90 hits for the US in the source country graph.

So, digging into all this info, who is really delivering the most native IPv6? Most of the AS'es mentioned are Dutch. We know some of the networkoperators of these networks, so we asked around to see if they host a tunnelserver. Also, the SixXS-site clearly states the IPv6 netblocks used for their tunnels. Unfortunately, Hurricane Electric doesn't seem to have that information public, so we need to make an uneducated guess there.

¹ <http://www.sixxs.net/>



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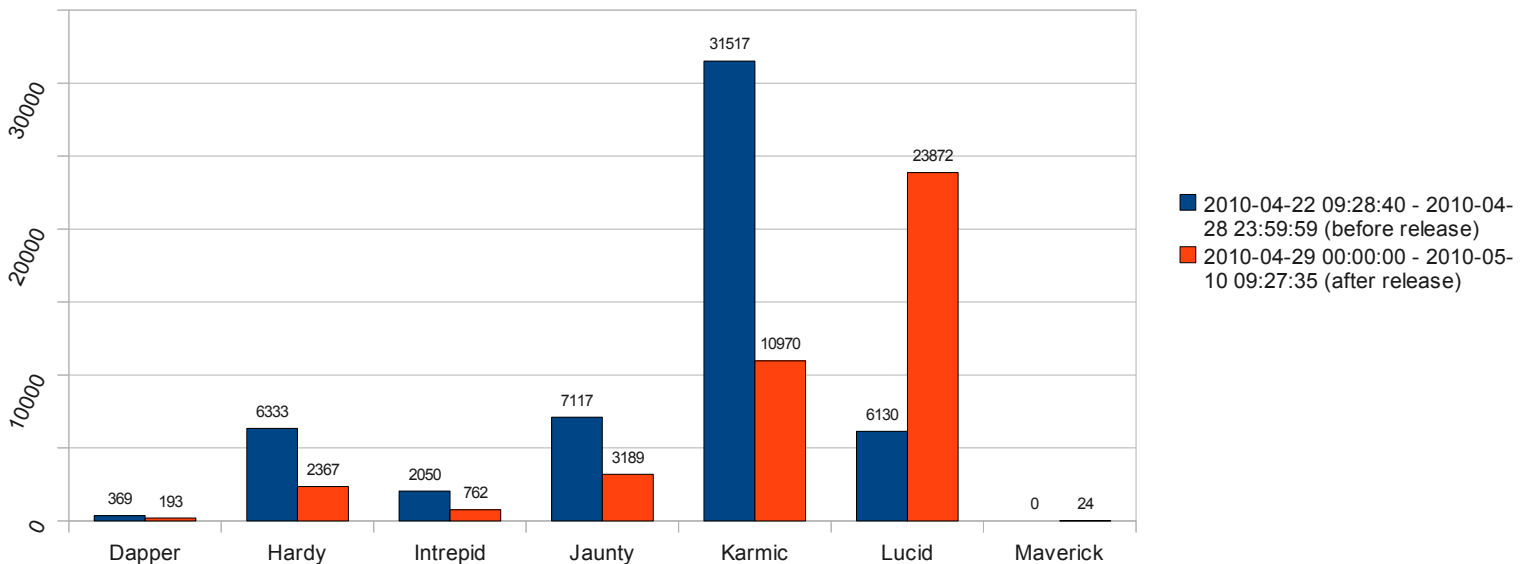
Rank	AS number	AS description	Native	Tunneled
1	AS1103	Surfnet, NL	370	145
2	AS12859	BIT BV, NL	192	71
3	AS3265	XS4All, NL	92	198
4	AS35470	XL-IS BV, NL	73	0
5	AS47869	Netrouting, NL	20	0
6	AS12989	Highwinds Network Group, Officially USA, actually NL	13	25
7	AS16265	Leaseweb BV, NL	11	112
8	AS6939	Hurricane Electric, USA	10?	80?
9	AS12871	Concepts ICT BV, NL	4	36
10	Unknown	Teredo and 6to4	0	514

Used Ubuntu versions

It is possible to see how many people are using the different versions of Ubuntu. Which is nice, because looking at those figures we can also think about how fast people are upgrading to a new version. Also, we can see if LTS versions really matter or that anyone just upgrades ASAP.

The graph below clearly shows that Karmic is the most used version before the release. Hardy and Jaunty are also quite popular.

Used versions of Ubuntu
 The week before and the week after



It is good to see that the week after the release, we see a lot of people upgrading from all older versions to the new LTS, Lucid.



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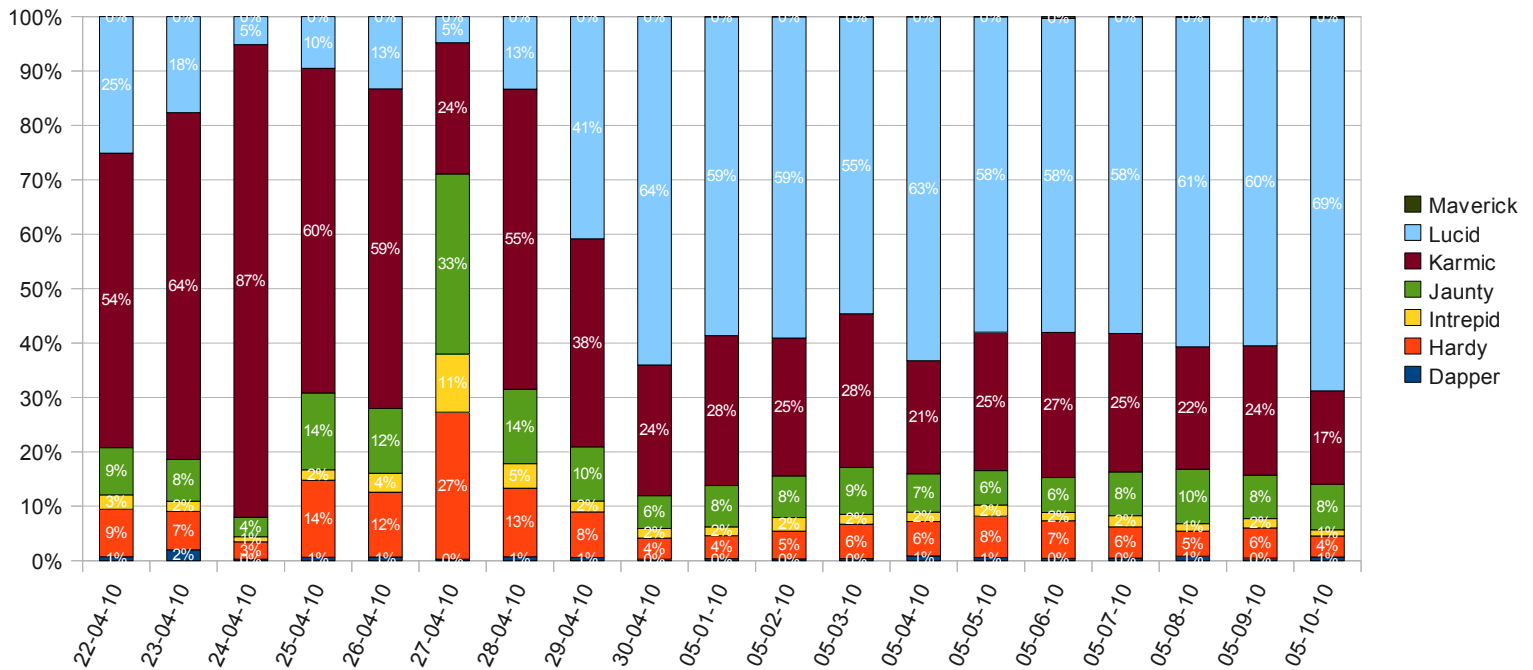
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If we break it down into days, you can see that the upgrades to Lucid are done quite fast after it's release. The first early adopters of Maverick (planned to be released 10-10-10) start using it the first of May! If we would have to make an educated guess about the number of people that upgraded to Lucid:

- From Karmic to Lucid: 16385
- From Hardy to Lucid: 1467

Used version of Ubuntu

Per day





nl.releases.ubuntu.com

nl.releases.ubuntu.com is the main .nl ISO mirror, where people can download their install CD's. We don't have a clear view on who ends up here, since the Ubuntu download page redirects to multiple mirrors in a country. We can however tell how many downloads we have seen, and where people came from.

releases.ubuntu.com (and all country-hostnames that don't have a local mirror) points to several hosts. All the IPv4 addresses point to Canonical, but the IPv6 addresses point to nl.releases.ubuntu.com, se.releases.ubuntu.com and us.releases.ubuntu.com. We can expect to receive 1/3'rd of the IPv6 requests for releases.ubuntu.com.

Basic visitor stats

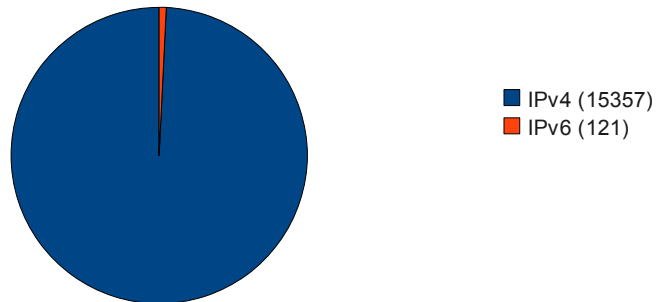
Again, the number of IPv4 and IPv6 IP addresses seen:

- IPv4: 15357 (99,2%)
- IPv6: 121 (0,8%)

Digging into IPv6 won't produce much interesting information, with a sad number of 121 IPv6 users.

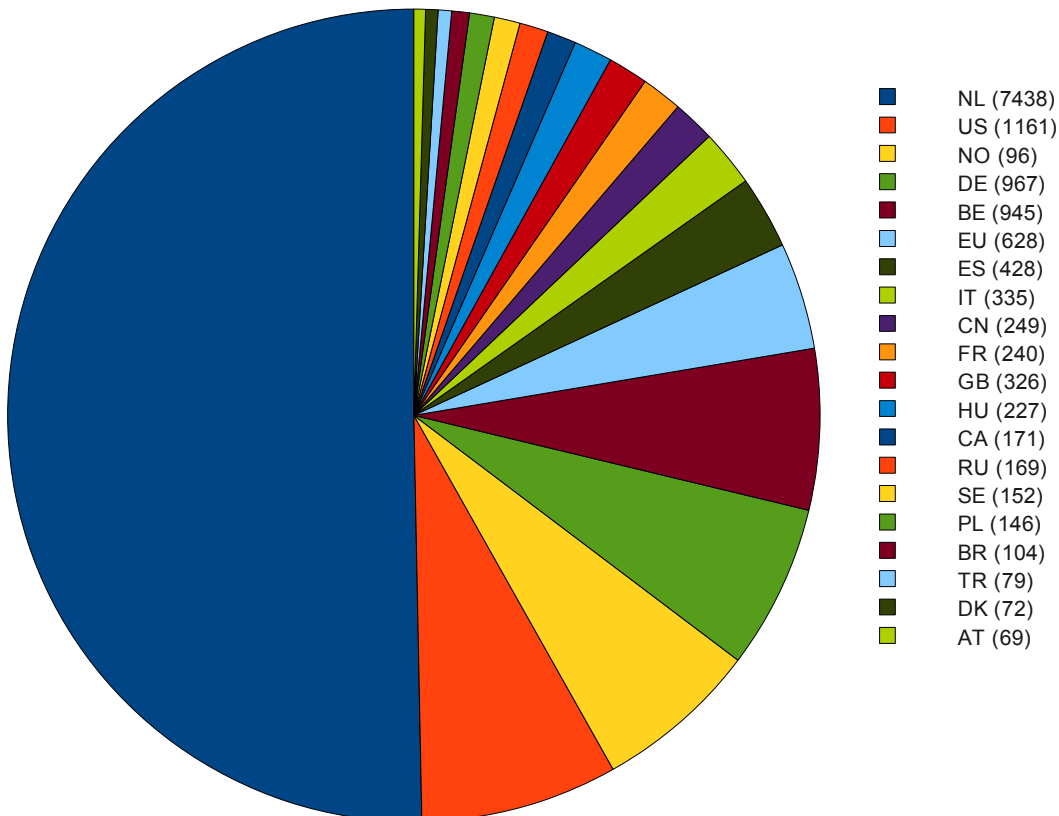
Unique number of IP's seen on nl.releases.ubuntu.com

IPv4 and IPv6



Countries seen on nl.releases.ubuntu.com

Top 20





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Source countries

And where do people come from?

Still a lot of Dutch users. But looking at the total amount of IP's, not even half of them is Dutch. Why would so many people located in other countries use nl.releases.ubuntu.com? IPv6 as a cause for that is out of the question, given the fact that nl.releases.ubuntu.com only saw a mere 121 IPv6 addresses.

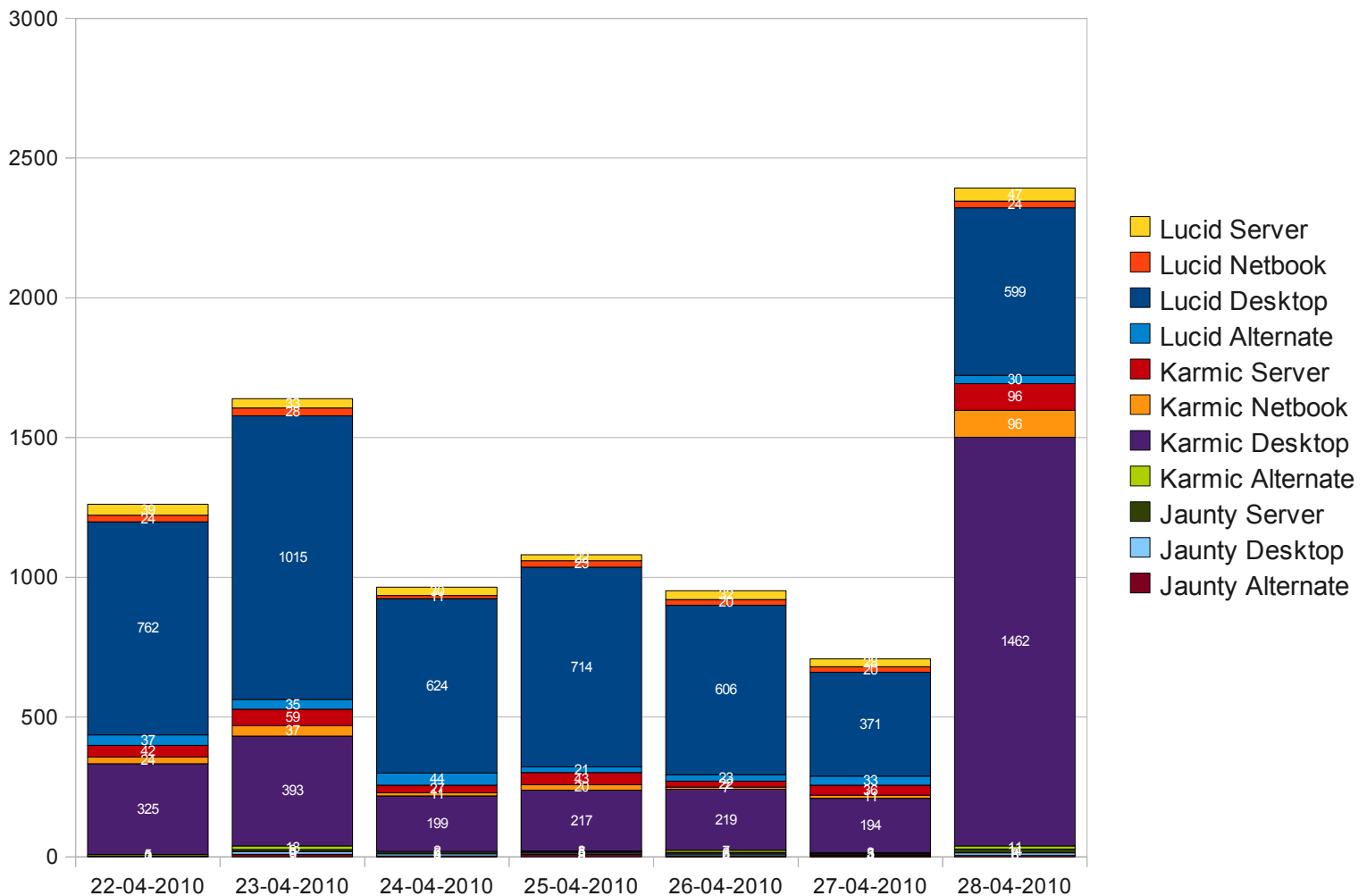
One of the reasons may be that some sites don't link to <http://www.ubuntu.com/getubuntu/>, but directly to some mirrors. Distrowatch has linked to nl.releases.ubuntu.com on the 22'th of April, for instance.

Downloaded versions

Breaking down the downloads into days, we see that the 'Lucid Release Candidate' is well downloaded, and thus well tested. After Lucid, Karmic Desktop is by far the most popular. We're not sure what happened the 28'th. We've already filtered a lot of bogus hits from the results, and still we see an abnormal amount of Karmic downloads.

Downloaded images of Ubuntu

The week before





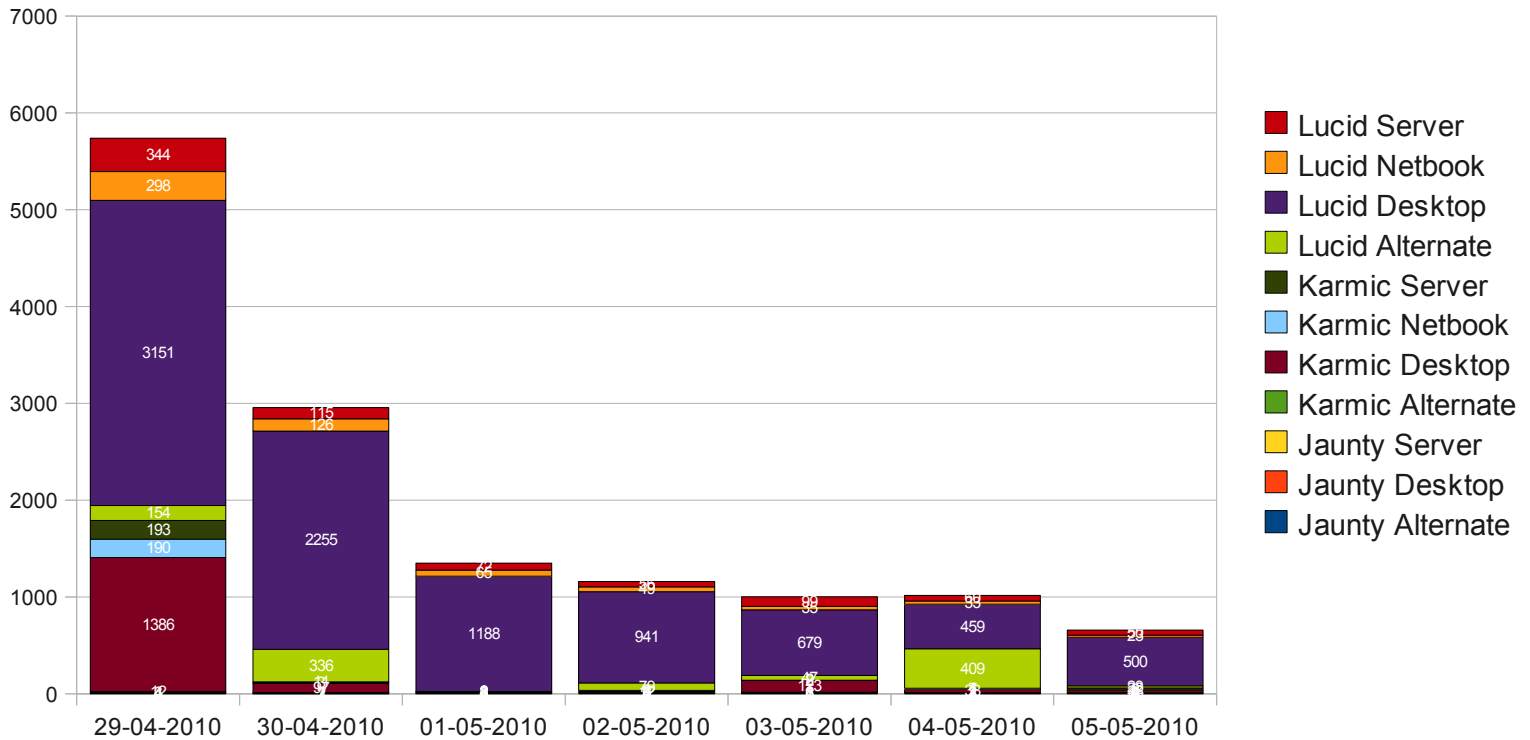
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Releaseday is a very busy day for the mirror. Where the busiest day before release was the 23'th (the day after the RC-release) with about 1600 downloads, releaseday has over 5500 downloads. The mirror peaked at 3.8 gbit that night. Over 50% of that downloads are the new Lucid iso. Again, Karmic Desktop is quite popular. After releaseday, downloads of all other versions but Lucid drop to almost zero.

Downloaded images of Ubuntu The week after



Useragents

Knowing how many downloads we've seen is interesting. However, it would be nice to know which OS the downloaders are using. Obviously, we hope to see a lot of user of other operating systems than Ubuntu. Existing Ubuntu users are good, but interested Windows users are better.

Only the Lucid downloads are taken into account, and we tried to get the most out of the UserAgent strings.

(See next page)

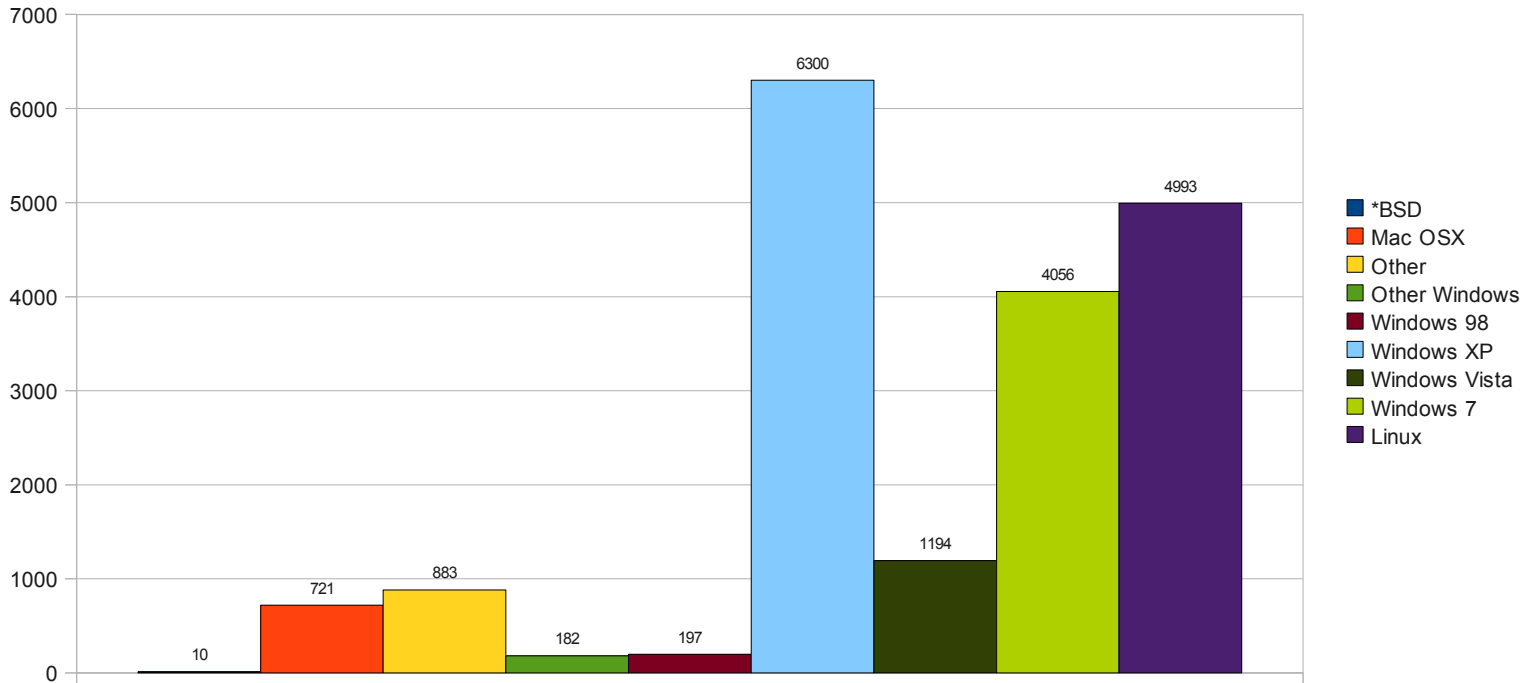


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Useragents of downloaded Ubuntu images





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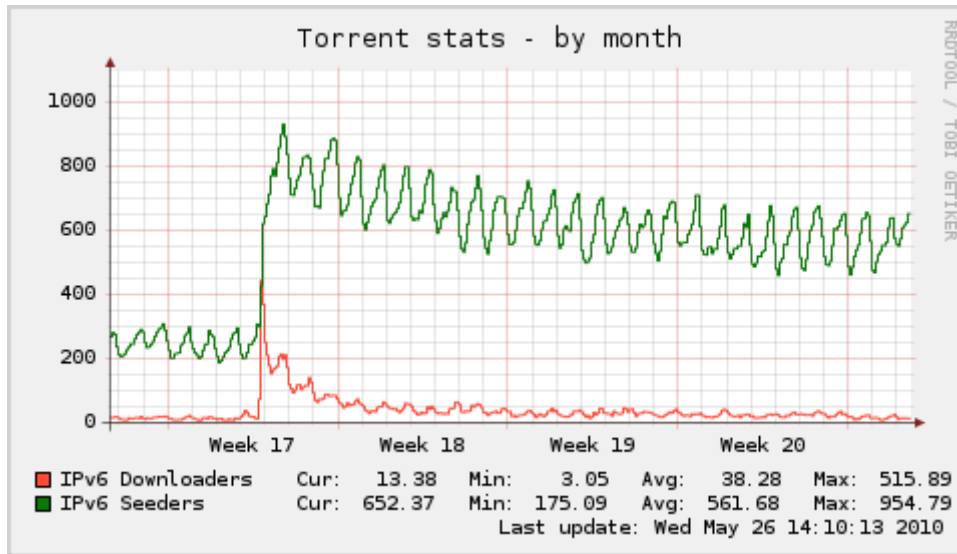
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ipv6.torrent.ubuntu.com

Canonical started pushing the tracker on ipv6.torrent.ubuntu.com in the official torrents on March 1'st. Before that, you needed to download a special torrent. And not that many people did..

The release of Lucid changed that. As soon as the where available, we saw an increase of the downloads and seeds. At it's peak, we saw 945 seeders, and 515 downloaders. Note that this tracker is only connected via IPv6, so all clients are 100% IPv6 enabled.



The type of IPv6 used to connect to the tracker is very different from what we saw on nl.archive.ubuntu.com. 94% Of the connected hosts use Teredo and 6to4. The good news is that we've seen **57000** IPv6-enabled torrent users!

IPv6 clients on ipv6.torrent.ubuntu.com

Type of IPv6

