MirrorBrain

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Downloads for the mob: the challenge

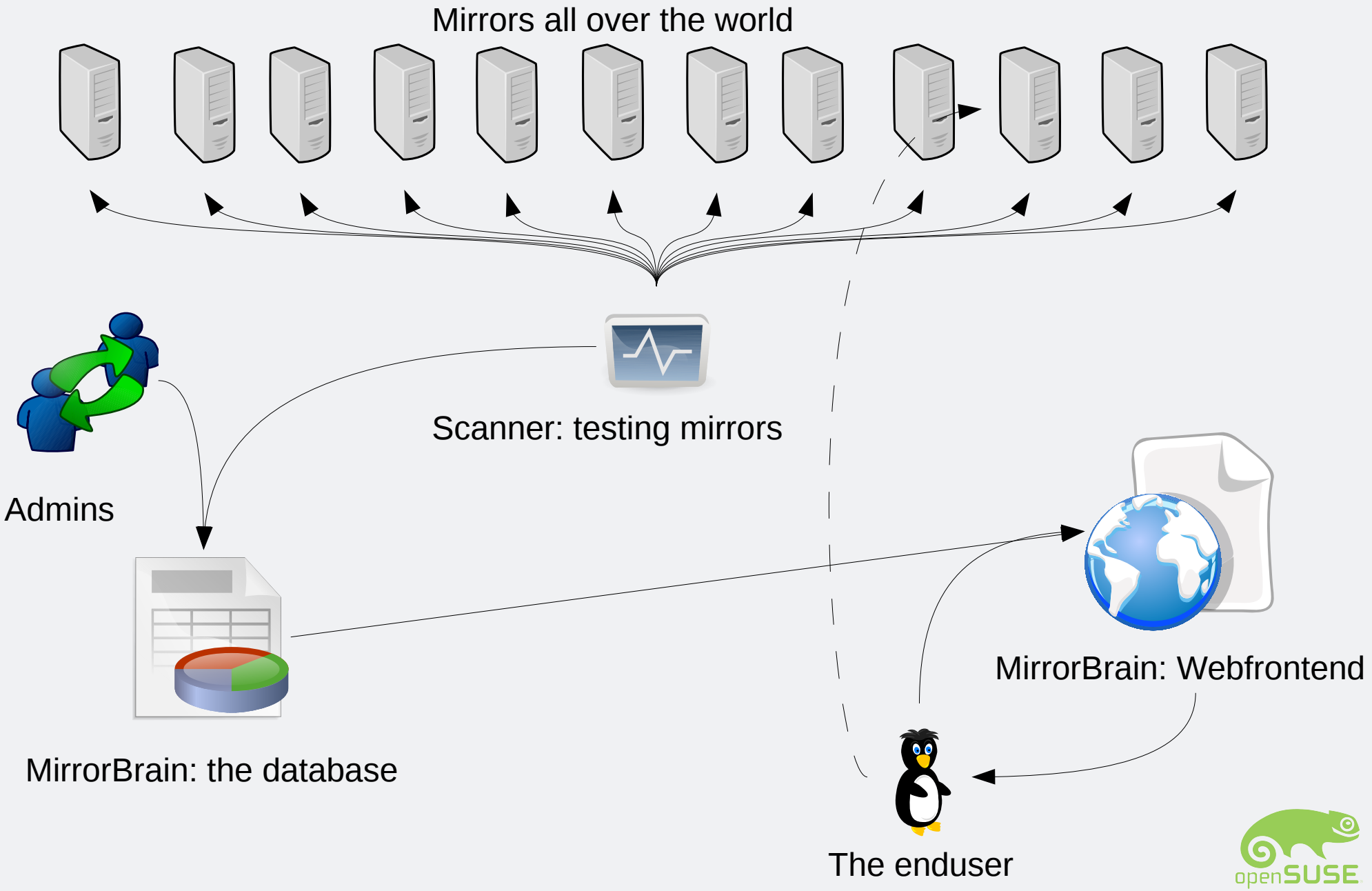
- openSUSE is attractive (**~500 requests/sec**) !
- Users should not need to search for a mirror to download files
- Nearly **6 TB** content served via download.opensuse.org !
- More than **180 mirror** servers around the world
  - Have different space for openSUSE content
  - Might have problems with big file sizes
  - Might have limited bandwidth
  - Might have other problems
- Safety and security (TRUST) is important

How to handle the problem ?

- Content Delivery Networks (CDN)
  - Geo-based DNS : resolving a DNS name to a close mirror
  - Control their own mirror servers around the world
  - Expensive
- Provide static mirror lists
  - Users have to choose manually
  - Control over the provided content is hard to achieve if maintainer != provider
- Transparent redirect via dynamic mirror lists
  - One master redirector to control them all (users and mirrors)
  - Difficult for user to override servers choice
  - Only possible via HTTP
  - Deal with partial mirrors

openSUSE

Structure: How it works



Tips and Tricks

- For Users:
  - Use http://mirrors.opensuse.org/ to check for closest mirrors manually
  - Add ".mirrorlist" at the end of your download URL or click on "details" in the web page to get a list of mirror servers around the world, metalinks and additional information about a file (size, checksums, etc)
- For Mirror Admins:
  - Provide rsync access to the scanner for really fast and reliable scans
  - Use http://mirrorpinky.opensuse.org/ in the near future to update the settings for your mirrors. Currently: write to admin@opensuse.org
  - Allow push syncs, so content is delivered on demand to your server
- For local Admins:
  - Add your IP (range) to MirrorBrain to become a "private" mirror for your clients, if you have not enough bandwidth or special policies
  - Add the public mirror list to your proxy ACL or firewall : squid compatible ACLs will be available with the upcomming mirrorpinky release

Screenshots

Detail view:

Mirrors for http://download.opensuse.org/distribution/13.1/repo/oss/ChangeLog

Powered by MirrorBrain

- Size: 45M (47022819 bytes)
- Last modified: Wed, 06 Nov 2013 19:01:21 GMT (Unix time: 1383764481)
- SHA-256 Hash: `0336122aaea9f992c10c68578305c2fa619fc05fe88e86ade0f5fb09a47dc829`
- SHA-1 Hash: `957f36ef19cd9430034c352f544d53990ff6c5f9`
- MD5 Hash: `81d410c9a5f2782cfaa9c82697db4113`
- BitTorrent Information Hash: `b8c770a10b1db17c6ba081aaf5058094fdad369b`

Metalinks for reliable downloads:
http://download.opensuse.org/distribution/13.1/repo/oss/ChangeLog.meta4 (IETF Metalink)
http://download.opensuse.org/distribution/13.1/repo/oss/ChangeLog.metalink (old (v3) Metalink)
P2P Links:
http://download.opensuse.org/distribution/13.1/repo/oss/ChangeLog.torrent (BitTorrent)
http://download.opensuse.org/distribution/13.1/repo/oss/ChangeLog.magnet (Magnet)

List of best mirrors for IP address 216.53.140.3, located at 28.618500,-81.433601 in United States (US), network 216.53.136.0/21 (autonomous system 14288):

Found 13 mirrors which handle this country (US):

- http://www.gtlib.gatech.edu/pub/opensuse/distribution/13.1/repo/oss/ChangeLog (us, prio 50)
- http://mirror.vtti.vt.edu/opensuse/distribution/13.1/repo/oss/ChangeLog (us, prio 100)
- http://mirror.nexcess.net/opensuse/distribution/13.1/repo/oss/ChangeLog (us, prio 100)
- http://suse.mirrors.tds.net/pub/opensuse/distribution/13.1/repo/oss/ChangeLog (us, prio 100)
- http://mirror.clarkson.edu/opensuse/distribution/13.1/repo/oss/ChangeLog (us, prio 100)
- http://mirror.metrocast.net/opensuse/distribution/13.1/repo/oss/ChangeLog (us, prio 100)
- http://mirrors.rit.edu/opensuse/distribution/13.1/repo/oss/ChangeLog (us, prio 10)
- http://opensuse.cs.utah.edu/distribution/13.1/repo/oss/ChangeLog (us, prio 100)
- http://opensuse.mirror.freedomvoice.com/distribution/13.1/repo/oss/ChangeLog (us, prio 100)
- http://mirrors1.kernel.org/opensuse/distribution/13.1/repo/oss/ChangeLog (us, prio 65)
- http://mirrors2.kernel.org/opensuse/distribution/13.1/repo/oss/ChangeLog (us, prio 65)
- http://mirrors.nl.eu.kernel.org/opensuse/distribution/13.1/repo/oss/ChangeLog (us, prio 50)
- http://suse.mobile-central.org/distribution/13.1/repo/oss/ChangeLog (us, prio 100)

Mirror List - Mozilla Firefox

Found 3 mirrors in other countries, but same continent (NA):

- http://mirrors.ucr.ac.cr/opensuse/distribution/13.1/repo/oss/ChangeLog (cr, prio 100)

Console: Show mirror information

```
mirrorbrain:~ > mb show widehat
identifier     : widehat.opensuse.org
operatorName   : IP Exchange
operatorUrl    : http://www.ip-exchange.de/
baseurl        : http://widehat.opensuse.org/
baseurlFtp     :
baseurlRsync   : rsync://62.146.92.210/scan/
region         : eu
country        : de
asn            : 15598
prefix         : 62.146.0.0/16
lat,lng        : 49.448,11.068
regionOnly     : False
countryOnly    : False
asOnly         : False
prefixOnly     : False
otherCountries : dk,pl il,tr,vn ao,bf,bi,bj,bv,cd,cf,cg,ci,cm,cv,dj,dz,eg,eh,er,et,ga,gh,gm,gn,gq,gw,hm,ke,km,lr,ly,ma,mg,ml,mr,mu,mw,mz,ne,ng,re,rw,sc,sd,sh,sl,sn,so,s
a,zm,zw a2 ge,kz,ua,ru
fileMaxsize    : 0
publicNotes    :
score          : 50
enabled        : True
statusBaseurl  : True
admin          : Marcus Rueckert
adminEmail     : ftpadmin@suse.de
---------- comments ----------
IP-Exchange mirror

raised score to 150
Wed Jun 11 00:21:42 CEST 2008

Note: score is undergoing circadian variation through /etc/crontab
poeml, Wed Oct  1 13:50:36 CEST 2008


disabling. Fixing reiserfs crash at the moment.
poeml, Thu Nov  6 14:58:58 CET 2008
```

Current mirrors.opensuse.org

openSUSE Download Mirrors - Overview

This page lists mirror servers where you can download openSUSE. The below comprehensive table shows what you will find on which mirror. It is *not a static* and outdated list — it is generated every 30 minutes and reflects the last state which was seen by probing. Thus it should be highly accurate regarding content and availability of mirrors. This page was created on Sat, 16 Nov 2013 17:00:17 UTC.

The master download server, download.opensuse.org, automatically redirects you to a server near you. The information on this page is generated directly off the database used by the master download server. So under normal circumstances, there should be no need to use mirrors directly, and look at this table for that purpose. If you *do* see the need, there might be something wrong and it would be appreciated if you notify the admins about it, so it can be fixed for the benefit of yourself, and possibly many other users.

For downloading CD or DVD images, there is software.opensuse.org to help with choosing the correct download. It also uses the below mirrors. Additional information about downloading openSUSE can be found in the openSUSE wiki.

The best (and fastest!) way to download CD or DVD images is with a Metalink client. Read this blog post explaining the "how" and "why", and the wiki page about Metalinks..

There are separate lists for openSUSE downloads. The following lists are available:

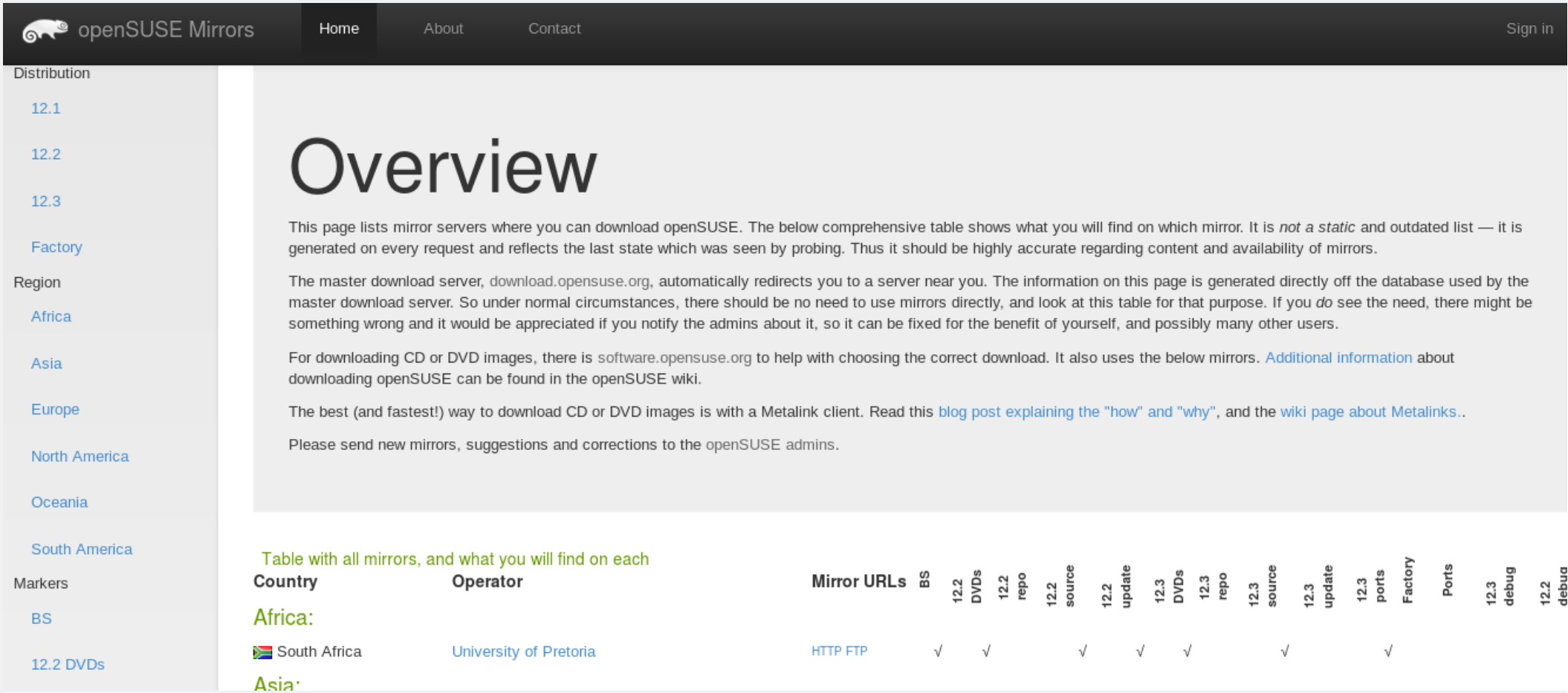
- openSUSE 13.1
- openSUSE 12.3
- openSUSE 12.2
- openSUSE Build Service
- openSUSE Factory
- openSUSE Ports
- All products (large table)

Please send suggestions and corrections by mail to admin at opensuse org. If you like to become a public mirror, please read the instructions on our wiki page and send us a mail.

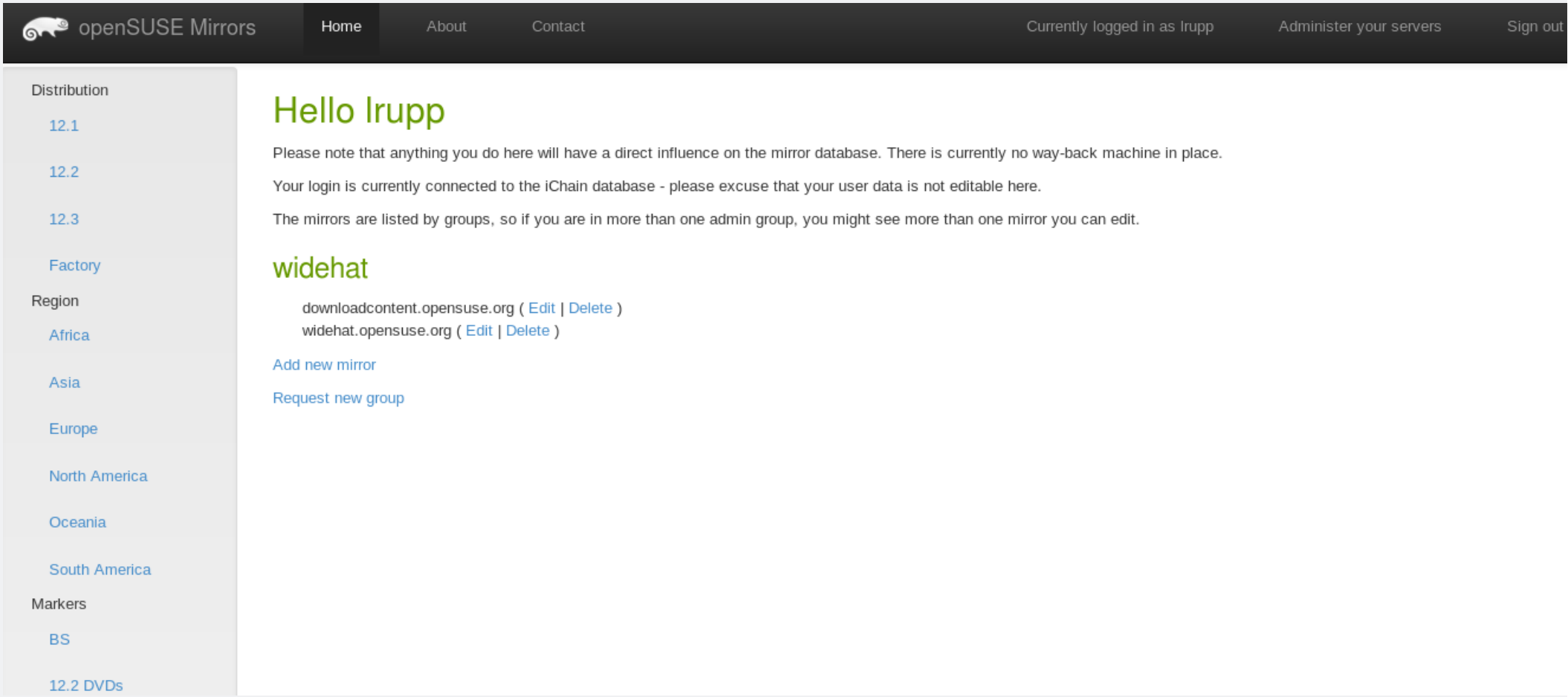
Table with all mirrors, and what you will find on each

Country	Operator	Mirror URLs	Priority	BS	12.2 ISOs	12.2 repo	12.2 debug	12.2 source	12.2 update	12.3 ISOs	12.3 repo	12.3 debug	12.3 source	12.3 update	12.3 ports	13.1 ISOs	13.1 repo	13.1 debug	13.1 source	13.1 update	13.1 ports	Factory	Ports
Africa:																							
South Africa	University of Pretoria	HTTP FTP	***		√	√			√	√	√			√	√		√			√	√		
Asia:																							

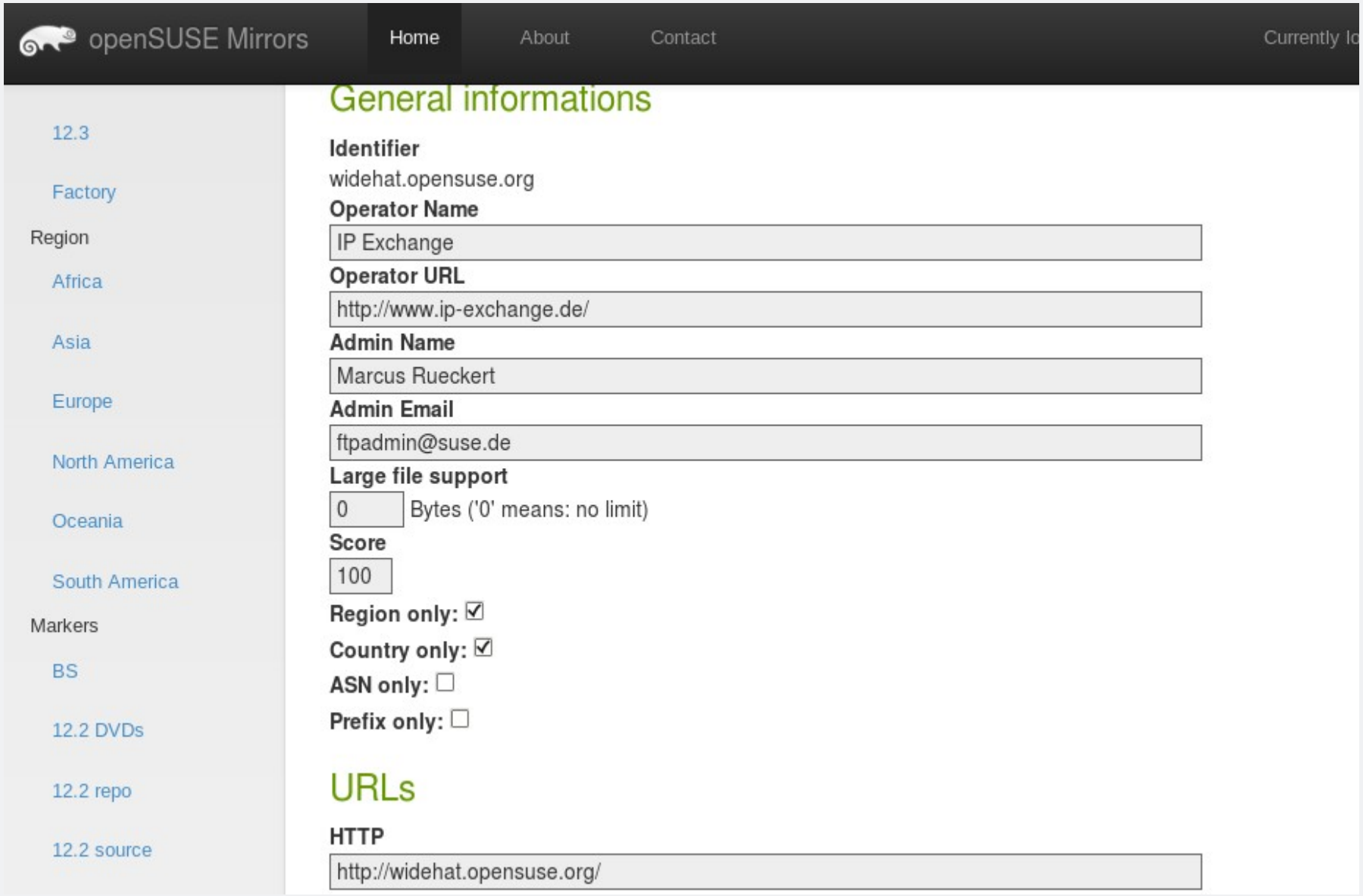
New mirrors.opensuse.org



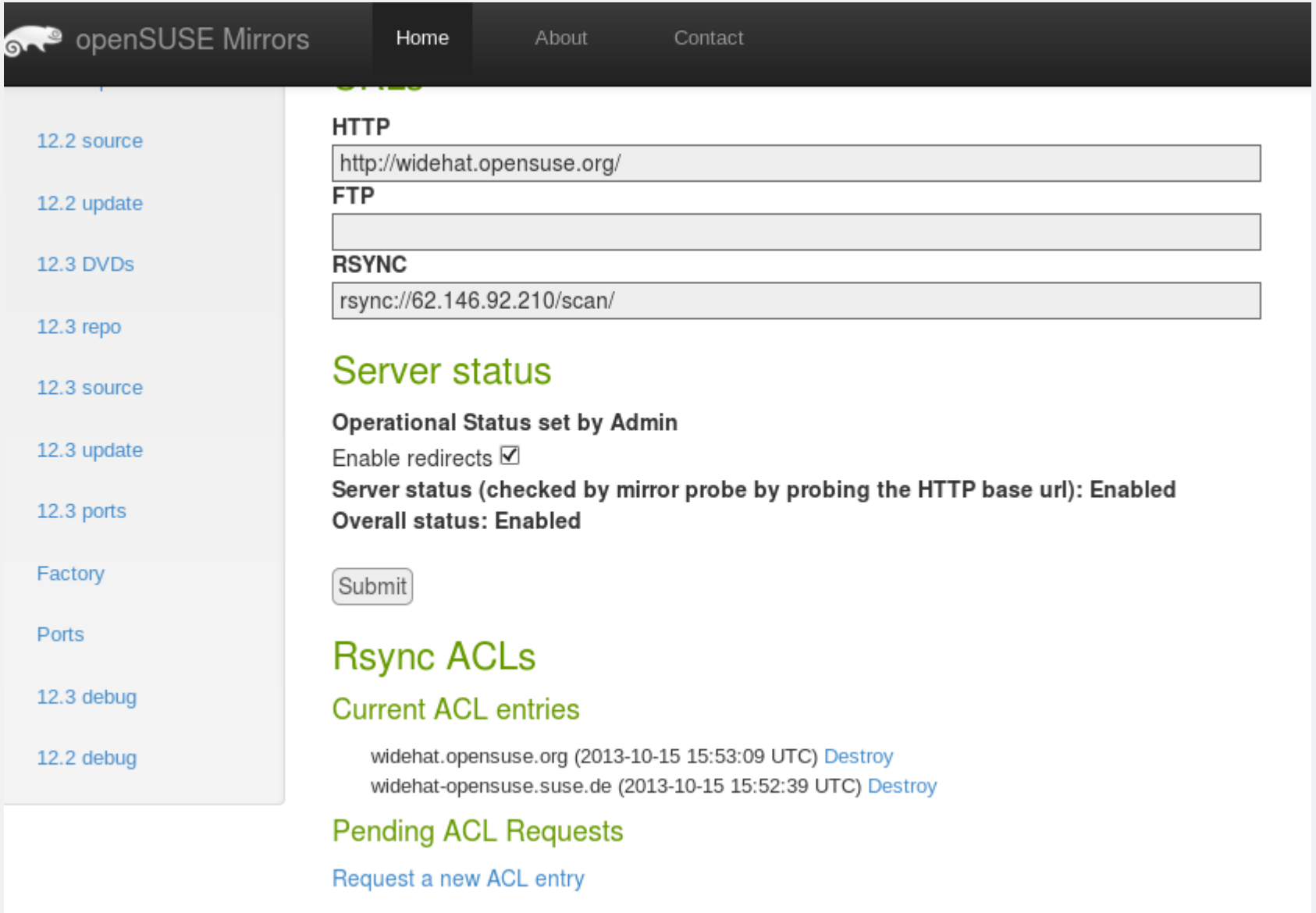
New admin interface



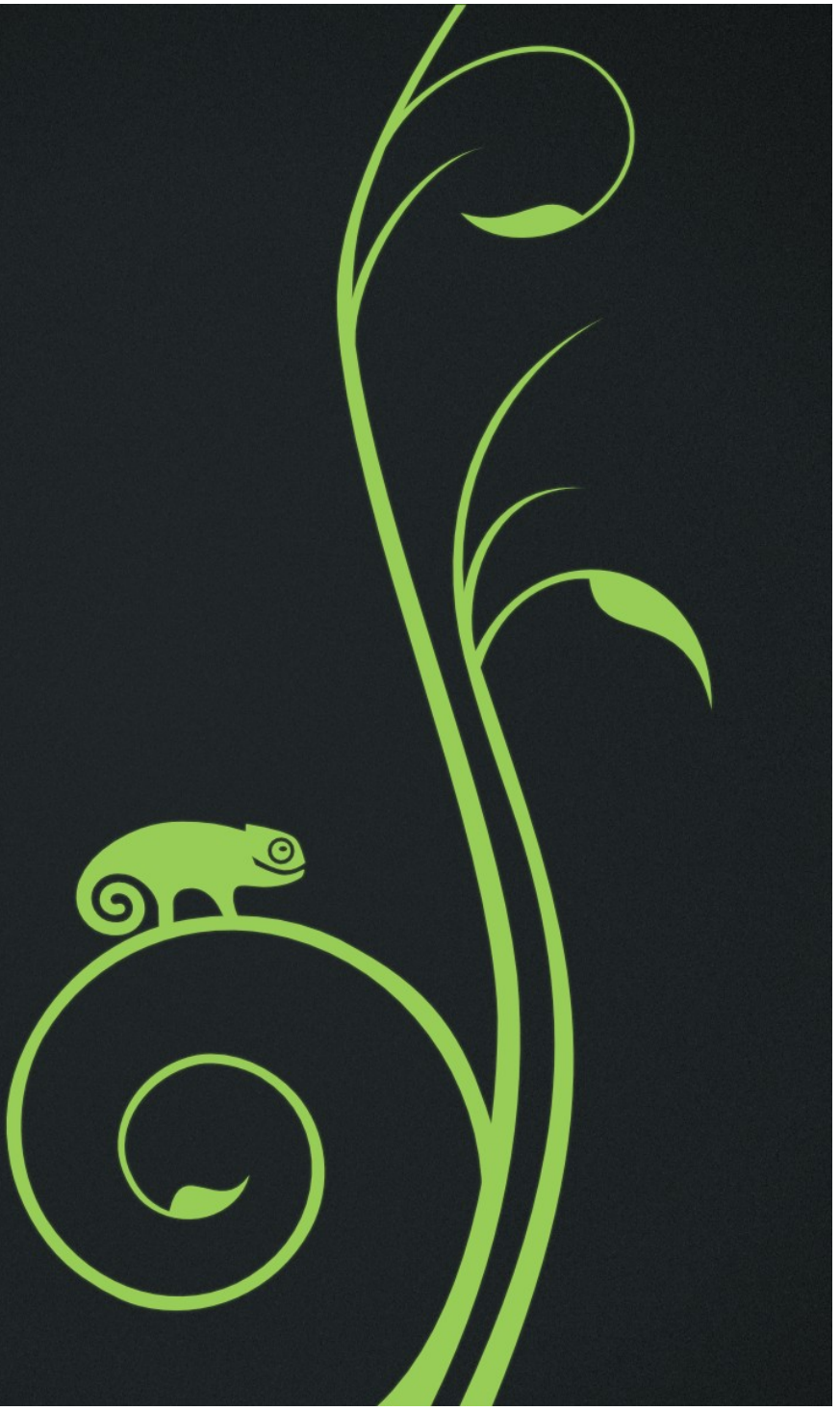
New: show/edit mirror



New: rsync ACLs

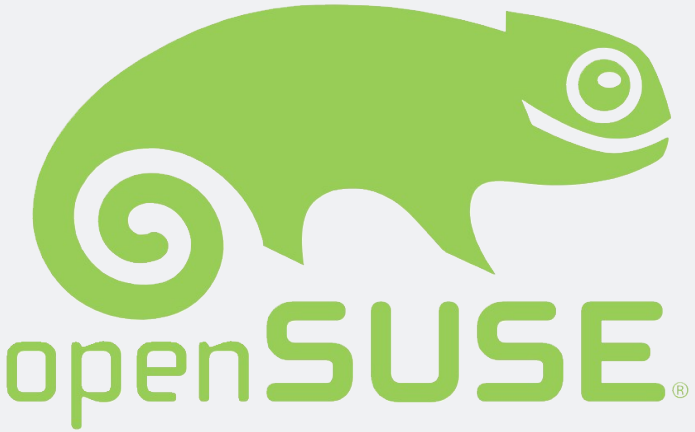


Who is using it ?



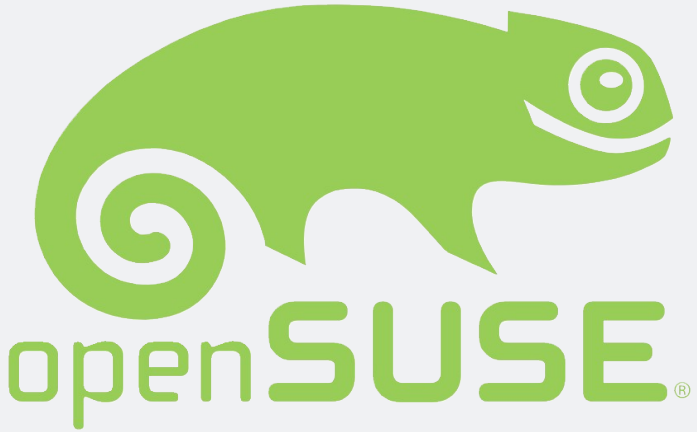
Some MirrorBrain users:

Questions ?



Join us on:

www.opensuse.org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