

The new openSUSE CDN

with a spotlight on mirrors

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WHOAMI(1)

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A digital globe with binary code and glowing lines. The globe is composed of a grid of blue and white dots, with glowing orange and yellow lines swirling around it. Binary digits (0s and 1s) are scattered across the surface, some appearing larger and more prominent than others. The overall color palette is dominated by blues, oranges, and yellows against a dark background.

The year of Availability

at least for openSUSE

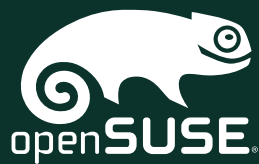
Since 2023 openSUSE has had new mirrors in South America, Albania, and South Africa.

Recently a sponsored CDN by Fastly improved transfer time by up to 20% and cut down latency by a factor of 5.

Availability improvements in 2023



- Earlier this year we've improved availability of openSUSE in Brazil and South America. See **talk from oSC2023 by Alexandre Vincenzi**
- We have a new openSUSE mirror in Albania thanks to Open Labs Hackerspace in Tirana. **See talk by Aulona Kolicaj**
- New mirror for Mauritius and South Africa. See the oSC2023 talk by Ish Sookun
- Dirk Mueller was working on getting a sponsored CDN subscription. Thanks to his effort Fastly.com has agreed to sponsor the openSUSE project with bandwidth. See see the article at dev.to/fastly



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So why does openSUSE need?

- To improve the download experience of our users in areas with no (reliable) mirrors.
- Users jumping on the new Tumbleweed snapshot before it gets mirrored causing hours to days of delays as mirrors have to fight for bandwidth.
- The caching features of Fastly's CDN help to reduce the incoming request rate as well as cutting down the latency so we don't hit the limits of our primary redirector proxies.



fastly[®]

ZYpp

Try out the new CDN with openSUSE-repos

```
# Works on all openSUSE distros  
zypper install openSUSE-repos
```

openSUSE-repos simplifies openSUSE repository management by utilizing Repository Index Service (RIS) for core distribution repositories and its latest update switches users to the new cdn.opensuse.org.

Or manually substitute repository urls in `/etc/zypp/repos.d` with <http://cdn.opensuse.org>

Related article by Ikocman

<https://news.opensuse.org/2023/07/31/try-out-cdn-with-opensuse-repos/>



How do we use our new CDN?

- User has to enable CDN manually (e.g. zypper in openSUSE-repos). Biggest advantage is for users in GEOs without reliable openSUSE mirrors. (CZ has 5 public mirrors)
- Mostly used by South America, Africa and North America (data as of this week)
- We serve files through CDN that are not yet found on any mirrors.
- The current plan is to serve only **small files** (<100kB) directly via CDN where latency matters the most. For larger files cache the redirect or metalink pointing to mirrors.
- Replacing download.o.o's redirecting 1.5 TB/h worth of traffic to our 100+ mirrors would be quite expensive. We're still a community project. Our contract comes limited **bandwidth**.



Using MirrorCache and Fastly CDN in parallel

- openSUSE is using MirrorCache a download redirector and metalink generator.
- **download.opensuse.org** and **software.opensuse.org** automatically choose the fastest mirror for you.
- Using a mirror directly is still the fastest for many users as CDN adds latency when caches are cold or expired.

Object Sizes Service: cdn.opensuse.org

Options ▾

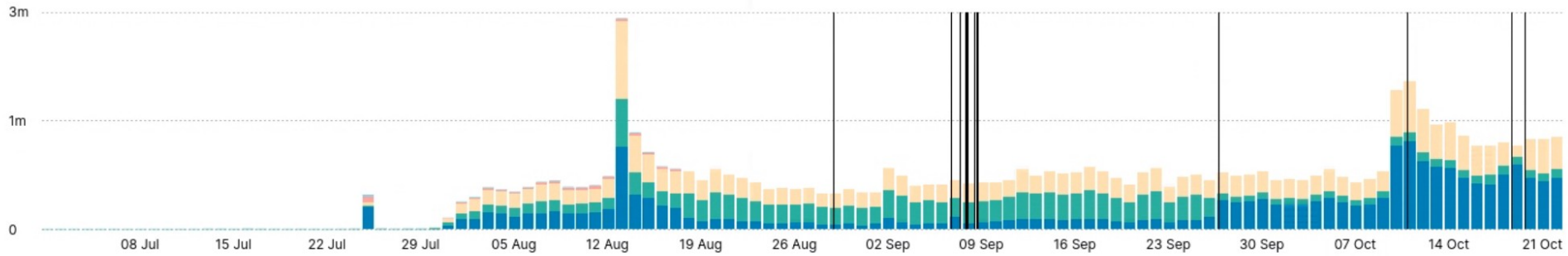
Day ▾

Custom ▾

▶ Live

Number of objects served by payload size.

Showing values from Jul 1, 2023, 2:15 PM to Oct 24, 2023, 3:15 PM UTC ✕ Clear Selection



Summary

Metric ↑	Total ↑	Max ↑	Min ↑	Mean ↑
Object Size 10KB-100KB	23m	1m	30	206k
Object Size 10MB-100MB	50k	6k	0	438
Object Size 1KB-10KB	17m	612k	5k	150k
Object Size 1MB-10MB	130k	21k	0	1k
Object Size 100MB-6GB	6k	662	0	52
Object Size <1KB	24m	1m	1k	212k
Object Size 100KB-1MB	511k	62k	3	4k

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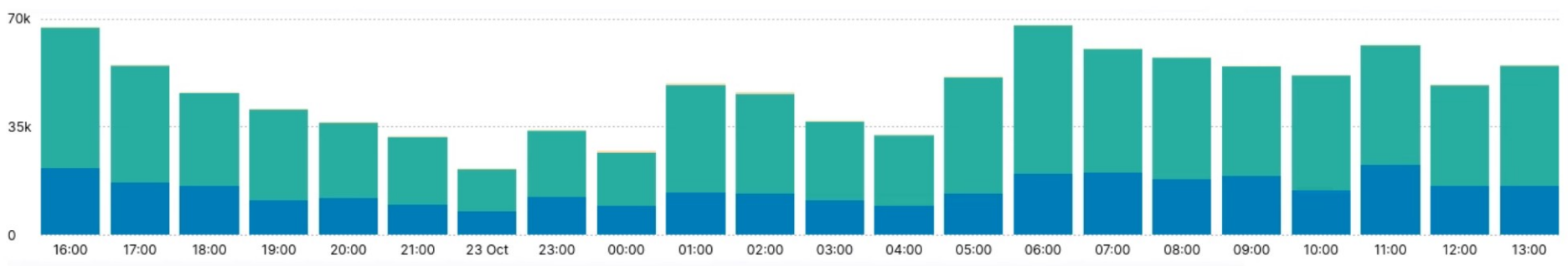
Service Overview > Metric Details

Requests

Service: cdn.opensuse.org

Options Hour 1 day ▶ Live

Number of requests by cache response type.



Summary

Metric ↑	Total ↕	Max ↕	Min ↕	Mean ↕
Errors	0	0	0	0
Hits	324k	23k	8k	15k
Misses	705k	48k	14k	32k
Passes	8k	672	248	354
Synthetic	0	0	0	0

By Time

Time ↓	Hits	Misses	Passes	Synthetic	Errors	Total
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```
.
├─ distribution 624G
│  └─ leap
│     ├── 15.3 166G
│     ├── 15.4 191G
│     └─ 15.5 205G
│  └─ leap-micro
│     ├── 5.2 12G
│     ├── 5.3 26G
│     └─ 5.4 26G
│  └─ openSUSE-current -> leap/15.4
│  └─ openSUSE-stable -> openSUSE-current
├─ factory -> tumbleweed
├─ ports 98G
├─ tumbleweed 125G
└─ update 789G

Total 1.6T
```

Are you interested in your own openSUSE mirror?

You only need 40 to 60GB of space and 2TB of bandwidth. It's better to have at least 100mbit.

- opensuse.org/openSUSE:Mirror_howto
- [Containerized home mirror \(my hackweek proj\) github.com/lkocman/opensuse-mirror](https://github.com/lkocman/opensuse-mirror)
- [openSUSE proxy cache for your home github.com/Firstyear/opensuse-proxy-cache](https://github.com/Firstyear/opensuse-proxy-cache)



openSUSE Starts Logo Competitions



Join the contest!

The openSUSE Community is pleased to announce a logo competition for a **new openSUSE logo** as well as four of our openSUSE distributions.

The deadline is Nov. 22.

The winners will receive a “Geeko Mystery Box” as a reward for their creative designs.

<https://en.opensuse.org/Logocontest>



Thank you

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