



Red Hat
Platform
Tools Team

Packaging LLVM Snapshots

Daily Builds for Fedora

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Fedora users now have LLVM snapshots

Something in the spirit of Debian's <https://apt.llvm.org/>

We're pleased to announce that we have a place where we build and distribute
LLVM packages:

<https://copr.fedorainfracloud.org/coprs/g/fedora-llvm-team/llvm-snapshots/>

We build for the latest Fedora versions, that currently are:

Fedora 34, 35 and "rawhide" (rolling release)

Why create snapshots?

Provide community with ready-to-use LLVM packages.

To be aware of problems before the next release.



Ideas

- We already build releases of LLVM in Fedora. Leverage that!
- Only replace official release with daily fake release
- Make as few modifications as possible

Recap: Stand-Alone builds

What they are and where they benefit us!



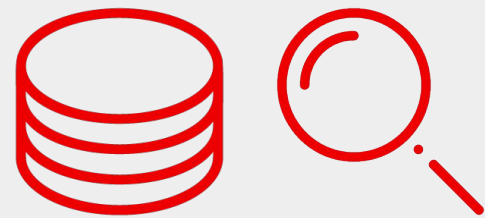
- Rather uncommon build method
- Build every LLVM sub-project (e.g. llvm, clang, mlir) on its own.
- Only “see” one sub-directory of the nested LLVM directory structure
- Multiple CMake invocations



- Reduces individual build times
 - Overall build time might be slower
- Get fixes in quickly
- Build projects in parallel
- CI advantage

Q: Which commit to take?

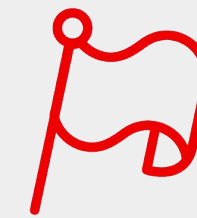
A: The one that passes some tests



Go backwards through LLVM commits beginning with "main"



Check overall status of git commit and check for individual ones



Flag first commit that meets criteria for next step

[InstCombine] reduce code for shl-of-sub transform: NFC
rotateright committed 3 hours ago

[InstCombine] add tests for shl-of-sub
rotateright committed 3 hours ago ✓

[mlir][sparse] sampled matrix multiplication
aartbik committed 3 hours ago

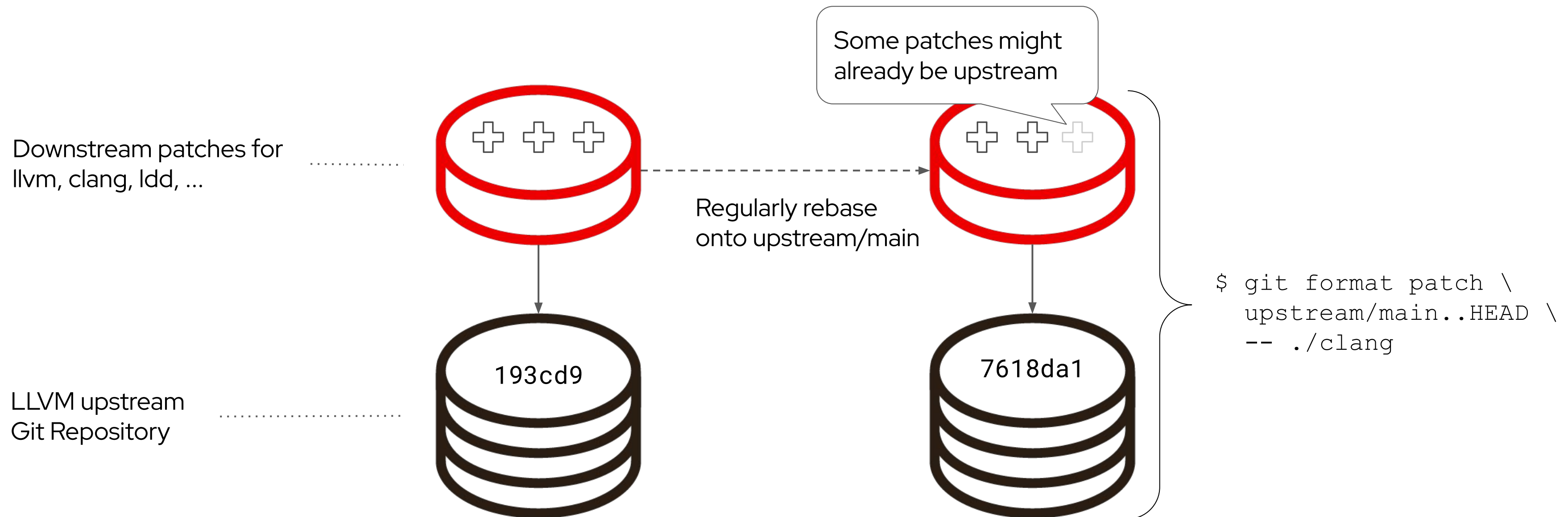
Revert "[clangd] Refactor IncludeStubs
nico committed 3 hours ago ✓

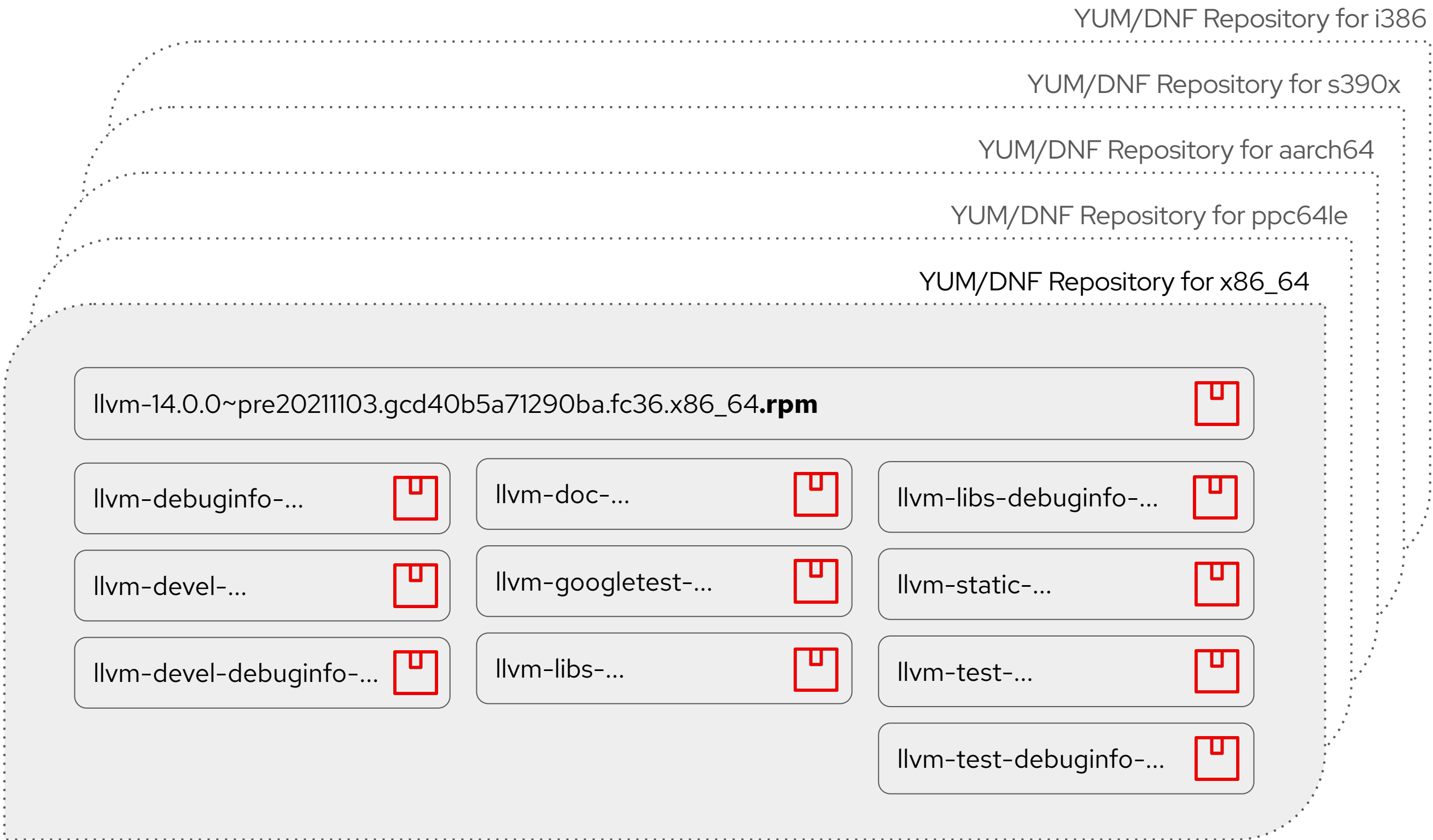
Some checks haven't completed yet
1 pending and 2 successful checks

●	llvm-clang-x86_64-win-fast	Pending — Build started.	Details
✓	clang-x86_64-debian-fast	Build done.	Details
✓	llvm-clang-x86_64-expensive-checks-debian	Build done.	Details

Keeping track of downstream patches

Have a mirror of upstream mono-repo with downstream patches applied





Serve RPMs in YUM repos

- Many architectures
- For latest three Fedora versions
- `dnf copr enable`

Bonus Material

Using two github actions for:

1. Creating source tarballs
 - a. With same script that is used for upstream source releases
2. Kicking off the builds

Fedora has fresh LLVM!

Grab yours:

```
$ dnf copr enable @fedora-llvm-team/llvm-snapshots  
$ dnf install clang
```

Or go here:

<https://copr.fedorainfracloud.org/coprs/g/fedora-llvm-team/llvm-snapshots/>



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