\TeX\ Live and Overleaf revisited

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Overleaf

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TEX Live and Overleaf revisited

Overleaf makes an annual deployment of \TeX\ Live, and we are wondering whether there is an opportunity for both Overleaf and the \TeX\ Live maintainers and \LaTeX\ developers to benefit from our deployments and related testings.

We already gave a presentation\textsuperscript{[1]} on this in 2020, and would like to follow up with more recent changes. An open discussion on the topic will follow a brief presentation.

My personal goal:

\textbf{Gather more feedback from people here!}

\textsuperscript{[1]}see youtube.com/watch?v=HTUVsowOYn8
Outline

1. About \TeX Live and Overleaf
2. Crash course: How to deploy \TeX Live
3. \TeX Live testing in Overleaf
4. Discussion
About \TeX{} Live

- All you need* to use \TeX{}
- (binaries, packages, fonts, etc.)
- Annual freeze in Q1, but packages updated on daily basis
- tug.org/texlive and ctan.org
- tlmgr update --all

About Overleaf

- \TeX{} editing platform
- Uses \TeX{} Live for \TeX{}
- Annual deployment of \TeX{} Live in Q3*
- overleaf.com
- About 2M active users each month
- (Almost) no mid-year updates
Crash course: How to deploy \TeX\ Live to millions of people

1. Prepare an initial Docker image
   - Self-contained VM with Linux and texlive

2. tlmgr update --all *

3. Make sure it has all it needs
   - R and Python packages, fonts
   - 3rd party tools (think ImageMagick or Inkscape)

4. Optimize
   - Remove duplicate fonts, remove documentation
   - Precompile fonts

5. Test, test and test ... (crucial!)


7. Go live & Monitor

[2] e.g. overleaf.com/blog/tex-live-2022-now-available
Testing

- Overleaf Gallery Templates — overleaf.com/gallery
  - Use as current TeX Live version as possible
  - Make sure that all templates work correctly
  - Benchmarking

- Manual testing/debugging
  - Done on failing gallery templates
  - Also on user-reported past issues

- Discussing with authors & maintainers — last year’s example:
  - Unterminated \romannumeral and infinite loops over unprotected font commands
  - Both issues caught by our testing, and swiftly solved (thanks!)\textsuperscript{[3]}

Discussion

(please use the microphone at all times)

1

2

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4

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...
Discussion

(please use the microphone at all times)

1. Should we feed back our findings to package maintainers?

2. Quicker/frequent \TeX{} Live deployments — pros and cons!

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