

EasyBuild 5.0.0

Simon Branford

EASYBUILD.io

building software with ease

EasyBuild 5.0.0 Released

One week ago

1,364 merged pull request from 25 different contributors:

- 245 merged pull requests for EasyBuild framework
- 341 merged pull requests for easyblocks
- 778 merged pull requests for easyconfigs

Kenneth mentioned several other EB5 development statistics

Celebrate!

env.sh and cmd.sh

```
(venv) simon@owl:~/work/eb$ █
```

Improved user experience

Default to maximum parallelism of 16

- Rise in large core count systems leads to confusing problems
- Speed up in installation when using >16 cores is small

Trace output

- Clearer indication of what EB is doing

Renaming of steps

- Clearer indication of what steps do

Breaking changes

Biggest ones were clearly indicated far in advance

- EB requires Python ≥ 3.6 to run and no longer runs on Python 2.7
 - Python 2 EOL was over 5 years ago!
- Lmod ≥ 8
- Environment Modules ≥ 4.3 (if using 4.x or 5.x)
- Removal of deprecated functionality
 - This would have been giving deprecation warnings in EB4
 - <https://docs.easybuild.io/easybuild-v5/removed-functionality/>
- Archive of easyconfigs for older toolchains
 - Removal of easyblocks where there is no easyconfig

EasyConfig Templates

A wider selection of templates is now provided

<https://github.com/easybuilders/easybuild-easyconfigs/tree/main/contrib/easyconfig-templates>

- Aim to help people writing their own easyconfigs
- Organised by toolchain
 - Relevant dependencies already defined
- Looking to add more

Enhancements

- New function to run shell commands: `run_shell_cmd`
- RPATH linking is enabled by default
- Copy build directory and/or log file(s) if installation failed
- Reproducible tarballs for sources created via `git_config`
- Granular exit codes
- `keep-debug-symbols` configuration option to set default value of 'debug'
- `toolchain` option
- More listed at <https://docs.easybuild.io/easybuild-v5/enhancements/>

Testing

Simon: Continual testing of latest EB5 development for over a year

Kenneth: Over 4,000 test installs in week leading up to release

Alex: Significant testing in the weeks leading up to release

Mikael: Used for deployment of software stack

Further information

Docs: <https://docs.easybuild.io/easybuild-v5/>

- These are a WIP

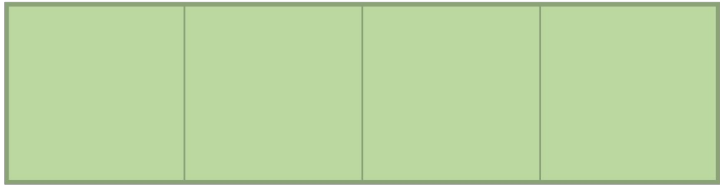
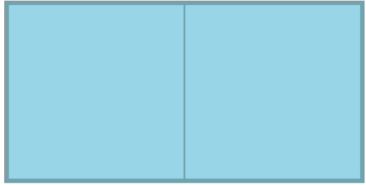
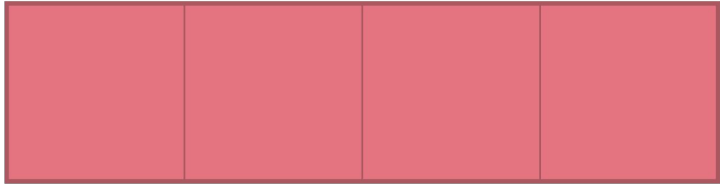
Ask questions via GitHub, Slack, mailing list

Observation

The EasyBuild annual survey is important

This allows us a snapshot of usage

- Architectures, Python, OS, etc.
- Decisions are made from this information



EasyBuild 6

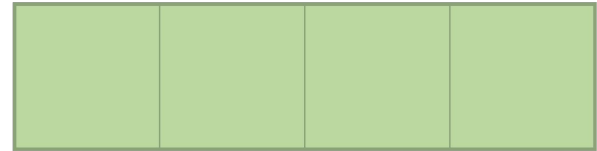
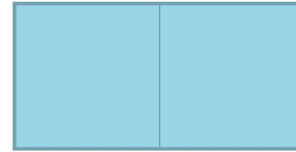
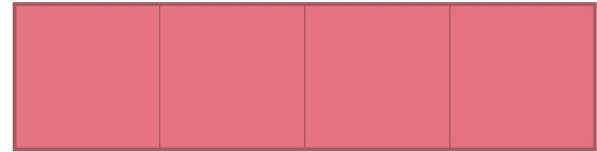
EASYBUILD.io

building software with ease

EasyBuild Releases

Major versions:

1. November 2012
2. March 2015
3. November 2016
4. September 2019
5. March 2025
6. ??



EASYBUILD.io
building software with ease

Outlook to EasyBuild 6

We're looking to release EB6 more quickly, 2-3 years time

Continue to improve user experience

Functionality deprecated in EB5 will be removed

- <https://docs.easybuild.io/easybuild-v5/deprecated-functionality/>
- When using EB5 these will throw a deprecation warning

Python 3.x

Python 3.9 is EOL this year

Python 3.6

- Harder to test in GitHub CI
- The reproducible checksums requires Python 3.9

Not sure if we'll change Python supported version in EB6