



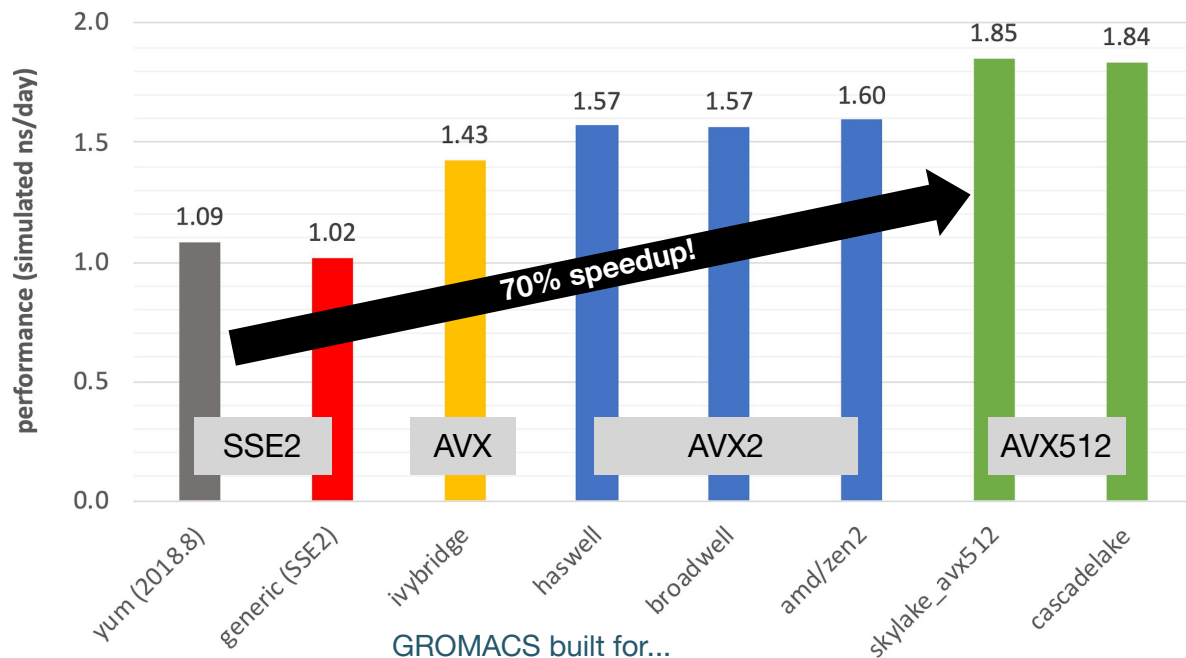
E E S S I

EUROPEAN ENVIRONMENT FOR
SCIENTIFIC SOFTWARE INSTALLATIONS

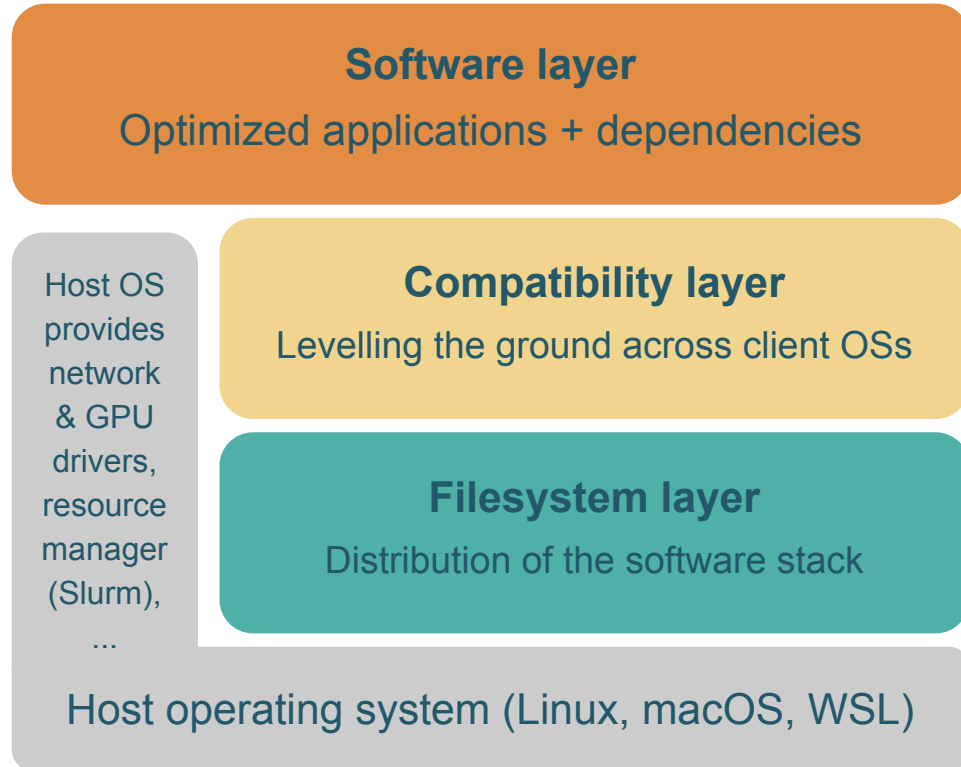
Optimized scientific software installations

- Software should be optimized for the architecture of the system it will run on
- Impact on performance is often significant for scientific software like GROMACS

- Example: GROMACS 2020.1
(PRACE benchmark, Test Case B)
- Metric: (simulated) ns/day,
higher is better
- Test system: dual-socket
Intel Xeon Gold 6420
(Cascade Lake, 2x18 cores)
- **Performance of different GROMACS binaries, running on the exact same hardware/OS**



High-level overview of EESSI project



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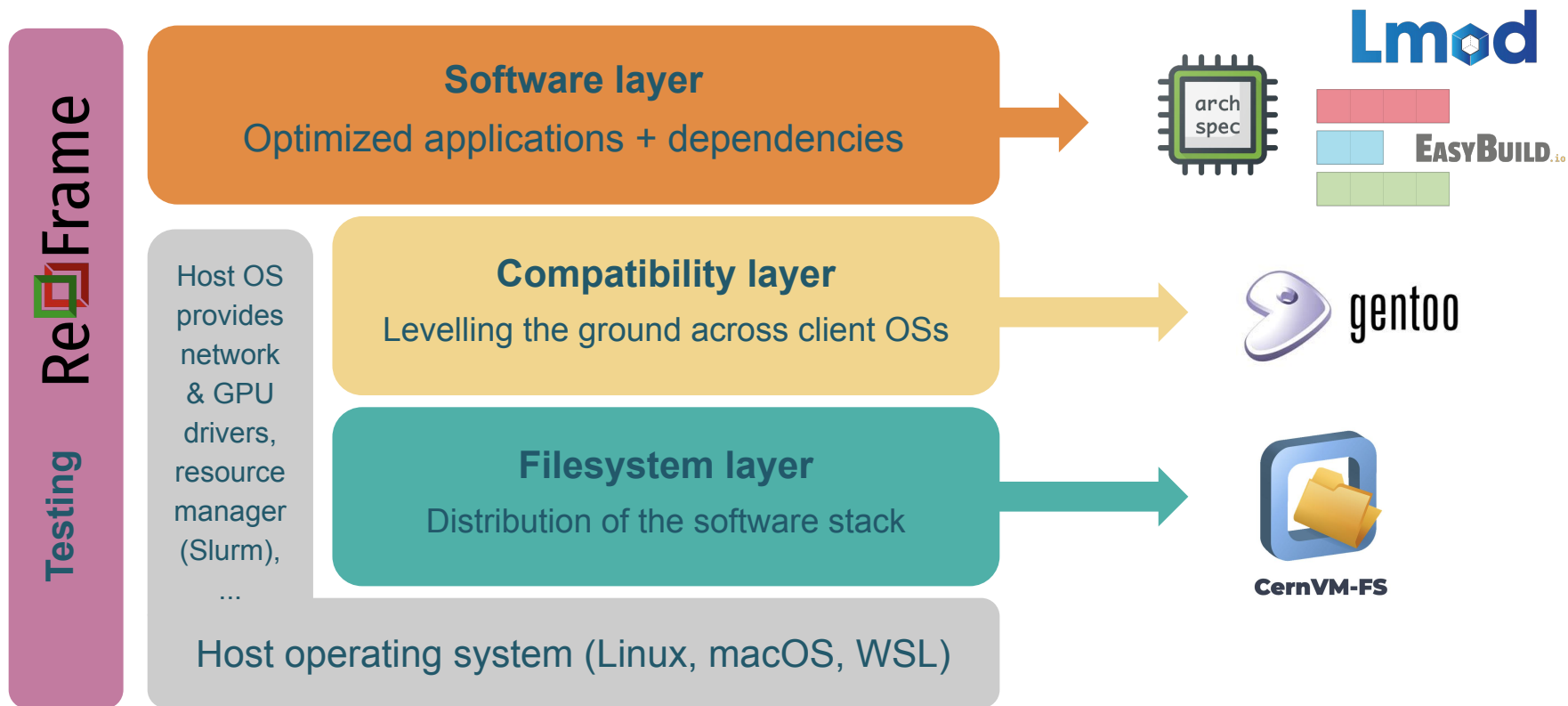


Streaming
scientific
software!

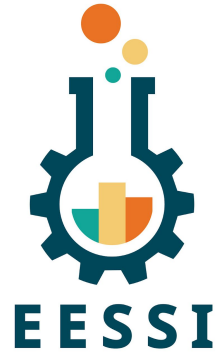
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Host operating system (Linux, macOS, WSL)

EESSI is built with FOSS

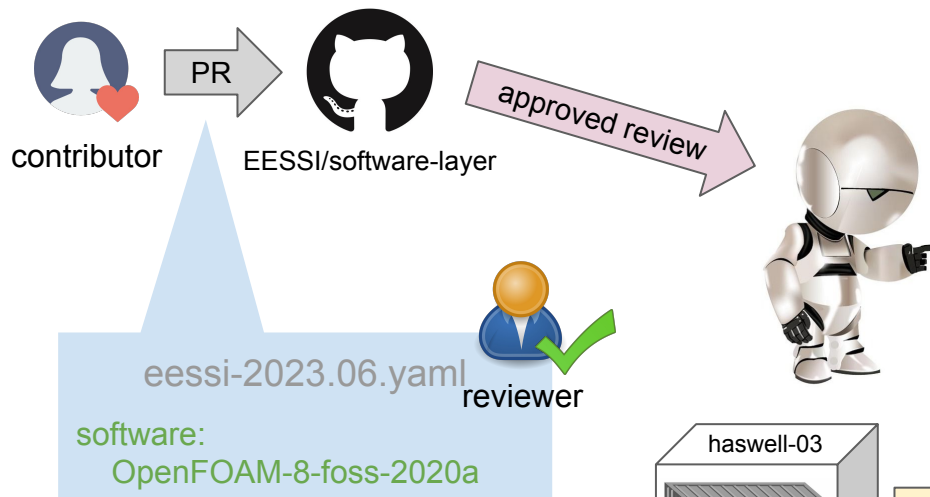


Building a community around EESSI

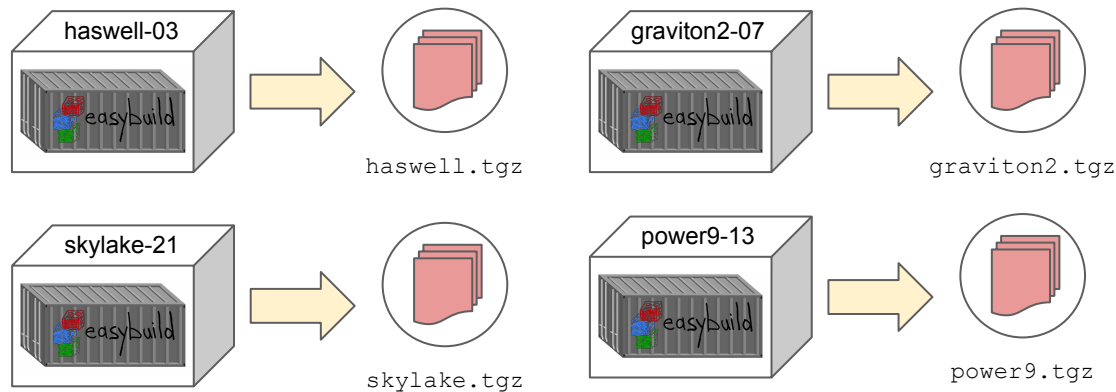


- **Give them a reason to contribute**
 - If they get their software into EESSI, we distribute it
 - We'll test their releases on lots of architectures
- **Make it as easy as possible for people to *start* contributing**
 - Can take a lot of effort in a complex project, hard to do without funding...but if you do, it can be worth a lot
- **Have the right attitude to new contributors**
 - Be responsive, have a thick skin, be kind and celebrate success

High-level overview of EESSI contribution workflow



```
# prepare job working directory for PR
# submit jobs to build software
sbatch ${pr}/scripts/${target}/build.sh
```





Paper (open access): <https://doi.org/10.1002/spe.3075>

Website: <https://www.eessi-hpc.org>

Join our mailing list & Slack channel

<https://www.eessi-hpc.org/join>

Documentation: <https://eessi.github.io/docs>

GitHub: <https://github.com/eessi>

Twitter: [@eessi_hpc](https://twitter.com/eessi_hpc)

[YouTube channel](#)

[Monthly online meetings](#) (first Thursday, 2pm CEST)