

2nd EasyBuild User Meeting: A Growing Community Gathers at JSC

Installing software on supercomputers is a significant burden for user support groups in many research centres. In recent times, open source projects have been created to help alleviate this. One such project, EasyBuild, enables the installation and presentation of a coherent stack of scientific software in an automated, reproducible way. It has grown into a thriving community and currently supports over 1000 software packages. JSC has embraced the project and become a core part of its community. As a result, JSC has hosted the 2nd EasyBuild User Meeting in February. In this event participants of 21 different institutions shared ideas as well as development and implementation strategies during the 3 days event, in a very successful meeting.

As supercomputing becomes more and more ubiquitous in a growing variety of research fields, the community of users expands and becomes more diverse. The direct consequence of this fact is the larger amount of software requested by HPC users, and larger variability in requirements between communities. Maintaining a software stack in 2017 is significantly more difficult than it was 10 years ago. Noticing this situation, Ghent University developed EasyBuild, a package manager for scientific software.

EasyBuild was developed with HPC centers in mind. It provides support for over 1000 software packages, and ensures that the compilation and module generation are done in a reproducible



Fig. 1: On Friday just the participants involved in EasyBuild development stayed to share ideas during the Hackathon.



manner. At JSC, EasyBuild became a core part of their strategy to maintain software on their clusters. As the first early adopter among large research centers, JSC also became a core part of the EasyBuild community.

With this in mind, it was natural for JSC to host the 2nd EasyBuild User Meeting. The event had over 35 attendees -with 14 different nationalities- from 21 different international institutions. During the meeting 10 different presentations -including 2 remote- were broadcast live over the internet. Among these presentations the participants could see how CSCS uses EasyBuild in their production Cray system, based on the work presented in [1], and how JSC manages its whole software infrastructure, based on the work presented in [2].

The 3 day event included one and a half days for a "hackathon". The target of these sessions was clearly focused on developing new features that can benefit the wider community. Members proposed ideas in a roundtable discussion, and created teams of collaborators with common interests.

The meeting itself was a very successful event with a forward looking perspective, including adding increased support for site customisations, new file formats to allow deeper collaboration on specific software packages and support

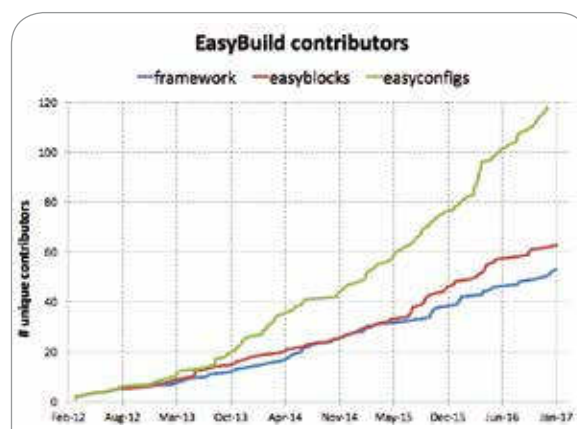


Fig. 2: The growth and engagement of the community is obvious when looking at the number of unique collaborators.

for new software packages and streamlined workflows. All participants were exposed to ideas that can benefit their institutions and the users of their systems once these ideas -both existing and to-be-developed- get deployed.

Institutions involved:

EMBL, CSCS, Compute Canada, Free University Brussels, Ghent University, IDRIS, Illumina, JSC, RWTH, University of Hanover, New York University Abu Dhabi, Ottawa Hospital Research Institute, STFC, TACC, The Francis Crick Institute, Universite Catholique de Louvain, University of Liege, University of Birmingham, University of Michigan, University of Muenster, University of Namur

References

- [1] Forai, P.; Hoste, K.; Peretti-Pezzi, G.; Bode, B.: Making Scientific Software Installation Reproducible On Cray Systems Using EasyBuild, Cray User Group Meeting 2016, London, England, 2016
- [2] Alvarez, D.; O'Cais, A.; Geimer, M.; Hoste, K.: Scientific Software Management in Real Life: Deployment of EasyBuild on a Large Scale System, 3rd International Workshop on HPC User Support Tools (HUST), Salt Lake City, UT, USA, pp. 31-40, 2016

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