EuroHPC JU Centre of Excellence

HPC Carpentry

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22 Oct 2024

My personal motivation

I work for one of the EU HPC Centres of Excellence, MultiXscale

◎ Materials community is quite vast

◎ Prolific use of community codes

◎ Many „added value" developers

◎ Springboard for half day lesson on using application *XXXX* at scale

◎ HPC Carpentry could open the door for many people to national and EU resources

Multi scale

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Goals

◎ Apply the Carpentries model to HPC training

◎ Open-source, community-designed training

◎ Easy to adapt for different systems

◎ Accessible to different audiences
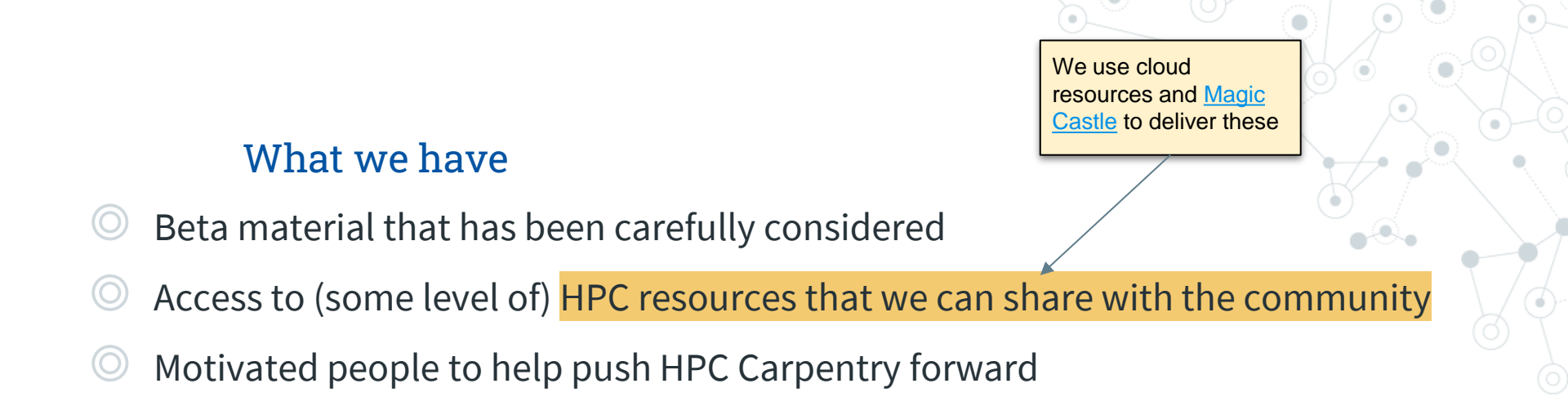
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Why HPC Carpentry?

◎ Scope creep for HPC (big data, AI,…) => **lots and lots of novices**

◎ Tackle the need for high quality **scalable training model** for novice users

◎ Provide **practical skills** in using remote, advanced computing for researchers

◎ Provide a welcoming and **inclusive environment** for all

◎ Foster the HPC community to **work together** to generate training materials

   ◎ Enable access to high quality HPC training materials worldwide, including countries with low levels of domain experience

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Lessons in the HPC Carpentry Lesson Program

- The Carpentries "The Unix Shell" lesson *(0.5 day)*

- Introduction to High Performance Computing *(1 day)*

- HPC Workflow Management with Snakemake *(0.5 day)*

Topics for an Introduction to HPC

◎ Why use HPC?

◎ Login and transferring data

◎ Understanding HPC jargon

◎ Basic understanding of HPC architectures and practical implications for their use

◎ File systems on HPC systems

◎ Execution environment, applications

◎ The scheduler and writing job submission scripts

◎ Shared system etiquette

◎ Troubleshooting strategies

What we have

◎ Beta material that has been carefully considered

◎ Access to (some level of) HPC resources that we can share with the community

◎ Motivated people to help push HPC Carpentry forward

We use cloud resources and Magic Castle to deliver these

What we need

◎ More community involvement

◎ More workshops…and feedback

◎ Wider set of maintainers around each lesson

◎ More time…volunteer effort means you are always running on fumes

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THE CARPENTRIES

[Lesson Program Incubation](#)

◎ 3 phases: Pre-incubation, Incubation, Adoption

◎ HPC Carpentry is the first program to enter *Phase 2: Incubation*

◎ Process is new for everyone so we are moving slowly

discuss-hpc@lists.carpentries.org
maintainers-hpc@lists.carpentries.org

[#hpc-carpentry](#) channel in The Carpentries Slack

https://hpc-carpentry.org/

Multiscale

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Web page: multixscale.eu

Facebook: MultiXscale

X: @MultiXscale

LinkedIn: multixscale

YouTube: @MultiXscale