

## [Infrastructure for High-Fidelity Testing in HPC Facilities](#)

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(The slides will be available under “Materials from the Webinar” in the above link.)

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**Q.** Can you clarify what you mean when you say “DevOps”? That is a term that is used to mean many different things in different situations.

**A.** DevOps in this scenario revolves around the set of practices, tools, and culture for software testing and deployment in HPC facilities.

**Q.** How do projects get resources (allocation hours) to run their CI workflow on the HPC systems you mention (OLCF,ALCF, NERSC)?

**A.** CI workflows don’t currently have a separate channel for allocations. A project would have to be established on these systems and use their normal allocation for CI processes. This could possibly change, depending on how facilities want to handle it in the future.

**Q.** What does a separate HPC system for CI processes look like? Why is this better or more feasible than working on the production system, perhaps with dedicated SLURM queues?

**A.** Decoupling the CI system from the production system can potentially open up the ability to provide more traditional, full, CI workflows. CI directly on the production HPC systems, even on a separate queue, creates security constraints and limits the ability to provide full CI capabilities.

**Q.** Is Jacamar a capability available in GitLab Community Edition? If it is separate from GitLab will a pull-request be opened to propose Jacamar integration into GitLab?

**A.** Jacamar CI is available against Gitlab CE and it is open source, being fully compatible with Gitlab.

**Q.** Is CI currently being deployed in ECP projects?

**A.** CI is adopted by ECP projects in various ways. They have CI available to them in PaaS systems like Github and then they can also use Jacamar CI where available.

**Q.** In the past, people could do pipelines without CI. What is the advantage of using CI now?

**A.** In this context we are talking about CI pipelines specifically. Different than other pipelines. Pipelines is certainly an overloaded term.

**Q.** What do you think about the possibility of having a CI-focused facility, something similar to Frank at UO, and just doing the current testing at facilities, but having clear ties between the big facility systems and the CI testing (smaller) facility? This would remove the additional security concerns from the big machine facilities.

**A.** This is definitely a valid option. The main concern would be keeping the software stack inline with the target facility. Drift happens quickly when systems are decoupled and managed by different facilities.

**Q.** Is it possible to make it easier to deploy Jacamar? I have approached a couple of non-DOE computer sites who are very interested, but have unfortunately told me that Jacamar might be too complicated to deploy. We need this because we don't (and practically can't) do all of our computation at DOE sites.

**A.** This is something we can certainly work on. We would be happy to discuss installation issues with sites and work towards a solution.