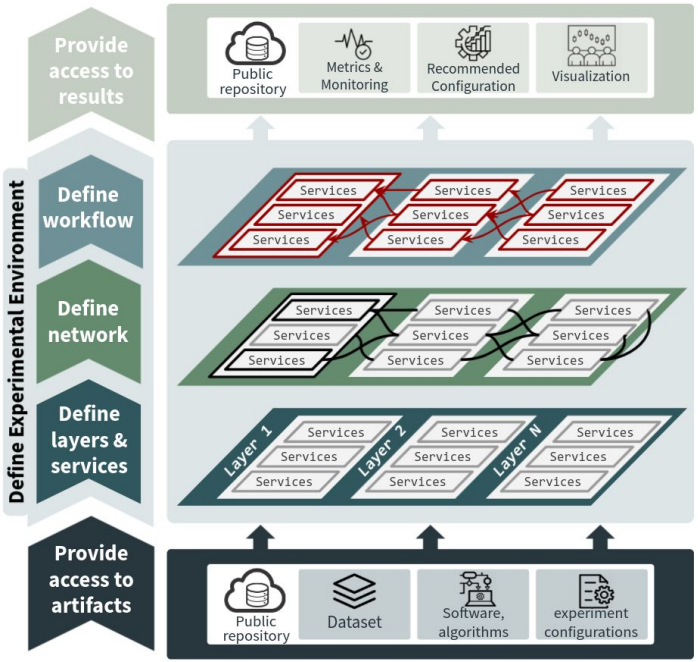
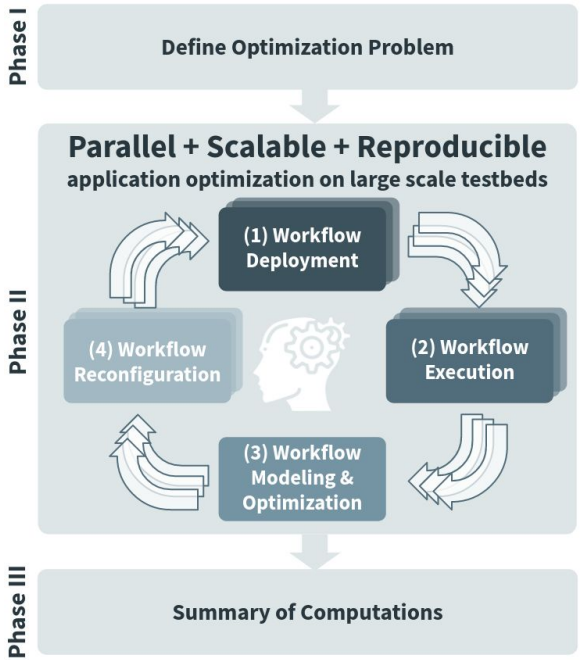
PhD topic: Enabling Reproducible Analysis of Complex Application Workflows on the Edge-to-Cloud Continuum

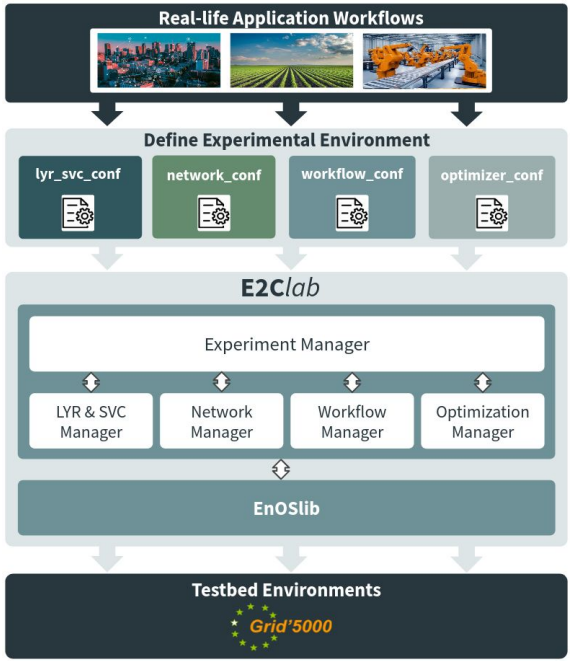
Experiment Methodology



Optimization Methodology



E2C*lab* Architecture



IEEE Cluster 2020

Daniel Rosendo, Pedro Silva, Matthieu Simonin, Alexandru Costan, Gabriel Antoniu. **E2Clab: Exploring the Computing Continuum through Repeatable, Replicable and Reproducible Edge-to-Cloud Experiments**.
〈https://hal.archives-ouvertes.fr/hal-02916032〉

IEEE Cluster 2021

Daniel Rosendo, Alexandru Costan, Gabriel Antoniu, Matthieu Simonin, Jean-Christophe Lombardo, Alexis Joly, Patrick Valduriez. **Reproducible Performance Optimization of Complex Applications on the Edge-to-Cloud Continuum**.
〈https://hal.archives-ouvertes.fr/hal-03310540〉

E2Clab is open source!
https://gitlab.inria.fr/E2Clab/e2clab

Documentation
https://e2clab.gitlabpages.inria.fr/e2clab/

Next Research Steps

Provenance capture on the Edge-to-Cloud Continuum as a **support to the reproducibility of experiments**

- What **parameters produced** these **results**?
- What **machines** were **used** to **execute** the **entire workflow**?
- What was the **runtime configuration** of the **machines**?
- What **steps** did I **invoke** during **workflow execution**?

In collaboration with:

- Marta Mattoso (Federal University of Rio de Janeiro, Brazil)