TEACHING DEVOPS

A personal point of view!

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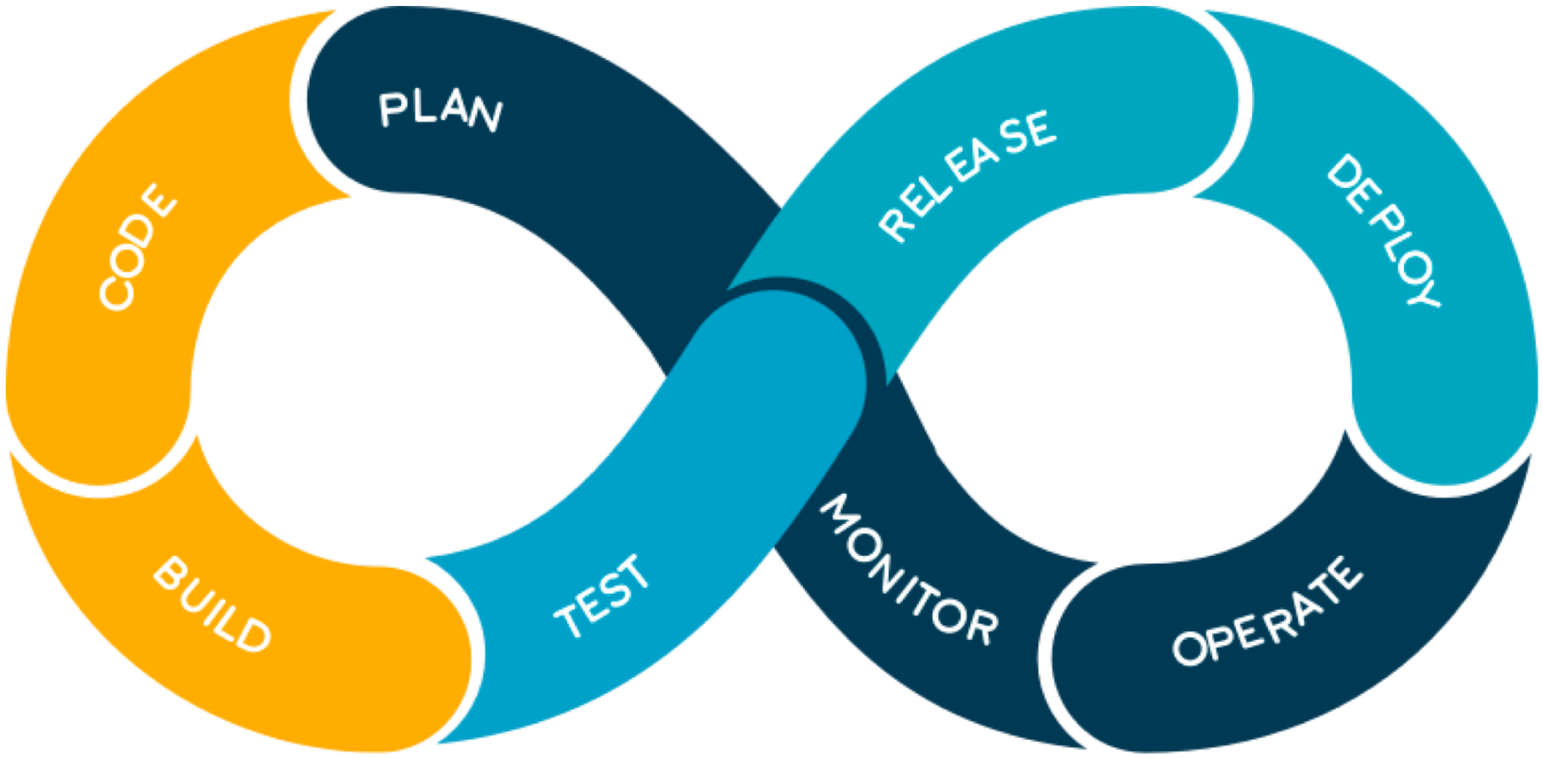
DevOps – State of Practices



- Current practices mostly automate previous hand made, error prone and time consuming activities (build, test, deployment, metrics monitoring…)
- Just the beginnings: we do not leverage the virtuous circle for providing a retroaction loop, back to the code, the test, the design, the requirements…

Personal experiences in teaching DevOps

1. Review of the literature about the current practices at the major IT key players

2. Project leveraging previous courses to relate and automate the build, test, configuration, deployment, and monitoring

- Focus on agility and collaboration

Requirements

- High skills in developments, incl. design, architecture, programming, testing, etc.

- Skills in system administration, computer architecture, and virtualization

Opportunities

- Cross reference and link together various courses of the curriculum

- Emergence of free (and sometimes open) frameworks, (e.g., GitHub, travis, classroom…)

- *Easily fun for students! ☺*

Difficulties

- Miss a **proper and sound theory** for DevOps
  - composability? correctness/validity? orchestration?

- Often engage **heterogeneous languages and environments**
  - tooling overhead
  - unsupported heterogeneity (interoperability, synchronization, coordination…)

Good Practices

- *not enough hindsight!*

- **Main observations:**
  - Practices through projects but…
  - A personal assessment about the overall process, objectives and expected outcomes is required