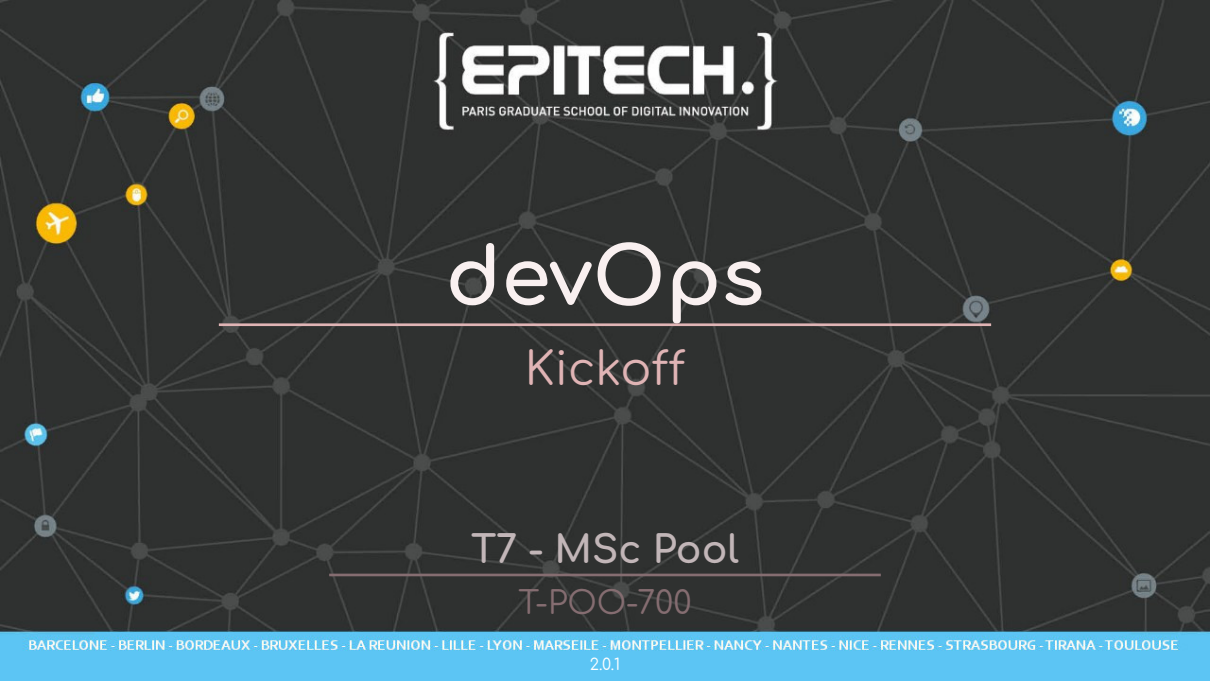


devOps

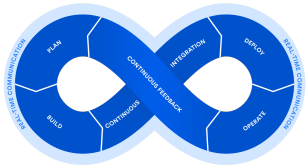
Kickoff

T7 - MSc Pool

T-POO-700

DevOps

- Systemic thinking ;
- Cross-communication ;
- Adapted tools to a new operation mode ;
- Bridge between development and operational teams ;
- Derived from the rejection of the traditional development model.



Architecture Micro-services

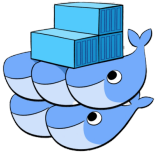
- Break up monolithic projects into several logical and separate parts ;
- A service does one thing and does it well (similar to the UNIX philosophy) ;
- Consistent with the Agile methodology ;
- Modular.

Docker

- Runs in containers ;
- Containers are isolated from the rest of the system ;
- Additional level of abstraction over VMs ;
- Lightweight and can be used on any server that owns Docker ;
- Allows to standardize.

Orchestrators

kubernetes



Do not worry about the operational side anymore:

- Scalability ;
- Load-balancing ;
- Automation ;
- …

Pipelines

- Part of the principle of continuous integration ;
- Integrates with most git services naturally (Gitlab, Github) ;
- Typical steps of a pipeline: build, test, deploy.

Travis CI

GitLab

Azure Pipelines

Monitoring

- Global vison ;
- Real-time metrics (server, pods, applications, etc.) ;
- Immediate notification as soon as a problem arises ;
- A lot of monitoring tools exist.

elastic stack

To go further

- The devops and its tools are in perpetual evolution
- SonarQube is a good addition to your devops architectures.
- It allows to continuously inspect and analyze the quality and consistency of the code of a project.

Any questions

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