

Three concerns focused

What do we want to talk about?

- Reliability
 - Making systems work correctly even when faults occur (hardware/software faults, human errors)
- Scalability
 - Having strategies for keeping performance good, even when load increase (data volume, traffic volume, or complexity)
- Maintainability
 - Making the system easier to maintain, and adapt for new use cases

Reliability

Fault is different from failure

- Fault v.s. failure
 - fault: one component of the system deviating from its spec
 - failure: the system as a whole stops providing the required service
- Deliberately inducing faults can exercise and test the reliability
 - The Netflix Chaos Monkey
- Prefer tolerating faults
 - when faults can be cured
 - otherwise, preventing faults is a better option