

2022 1st semester software engineering

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DevOps for CI/CD (continuous integration, continuous delivery)

Revolutionary SW development productivity

- In early 80's, one C line per day per SW engineer
- Since 2015 at least 50 times fold improved for SW dev productivity
- SW Reuse : biggest contribution of OO SW design/implementation methodologies
- Maturity of SW Eng. Tools since 2005
- Integrated into Cloud computing

Core Issue since 1960

- "software crisis"
- cloud computing env/technology advanced by leaps and bound since 2010
- DevOps tools matured/stabilized
- cloud computing and DevOps are independent of each other?

Why DevOps on Cloud?

- tools provided by CSP? (digital monopoly/authoritarianism, 1984 Orwellian)
- easy to use, will become easier
- development productivity w/ DevOps tools – overwhelming SW development competitiveness
- money!!! - best opportunity for Korea's SW industries
- instructor's personal experience

Textbooks

- lecture notes by instructor
- materials available on Internet

Grades

- quizzes & final
- tool using practices – just repeat practicing to use tools given in the lectures
- we do programming, but all programs are explained and provided in lectures
- A+ : good students who try additional practices on DevOps tools and help friends in class

AWS (amazon web service) vs MS Azure vs Google Cloud

<HW> Create AWS account, **Today right after class**

- caution – need a credit card for oversea transaction

<next lecture>

- creating AWS EC2 VM instance
- free tier VM – mostly ubuntu, sometimes RHEL(≡CentOS)
- need to install puTTY (SSH & Telnet client)
- **Linux commands – refer to man pages**
- **All demos should be practiced by students over and over again**