

CI/CD

CONTINUOUS INTEGRATION AND CONTINUOUS DEPLOYMENT

WHAT IS CI?

- **Continuous Integration**
- The practice of merging all developers' working copies to a shared mainline several times a day. *everything related to the code fits here*, Compile , Unit Test , Static Analysis , Dependency vulnerability testing , Store artifact

WHAT IS CD?

- **Continuous Deployment**
- A software engineering approach in which the value is delivered frequently through automated deployments. *everything related to deploying the artifact fits here* , Creating infrastructure , Provisioning servers , Copying files , Promoting to production , Smoke Testing . Rollbacks

BENIFITS OF CI/CD

- Automated Smoke Tests : Reduced downtime from a deploy-related crash
- Automated Rollback Triggered by Job Failure : undo production in case of failure which help on reducing cost

- Automate Infrastructure Creation and cleanup :
clean up unneeded infrastructure that reduce cost
also avoid human error
- Catch Compile Errors After Merge : reduce time
of developer to produce new code so more quality
and reduce cost of time
- Catch Unit Test Failures : avoid bugs in
production so more quality and reduce cost of time