DEVOPS TOOLS

CodeDeploy

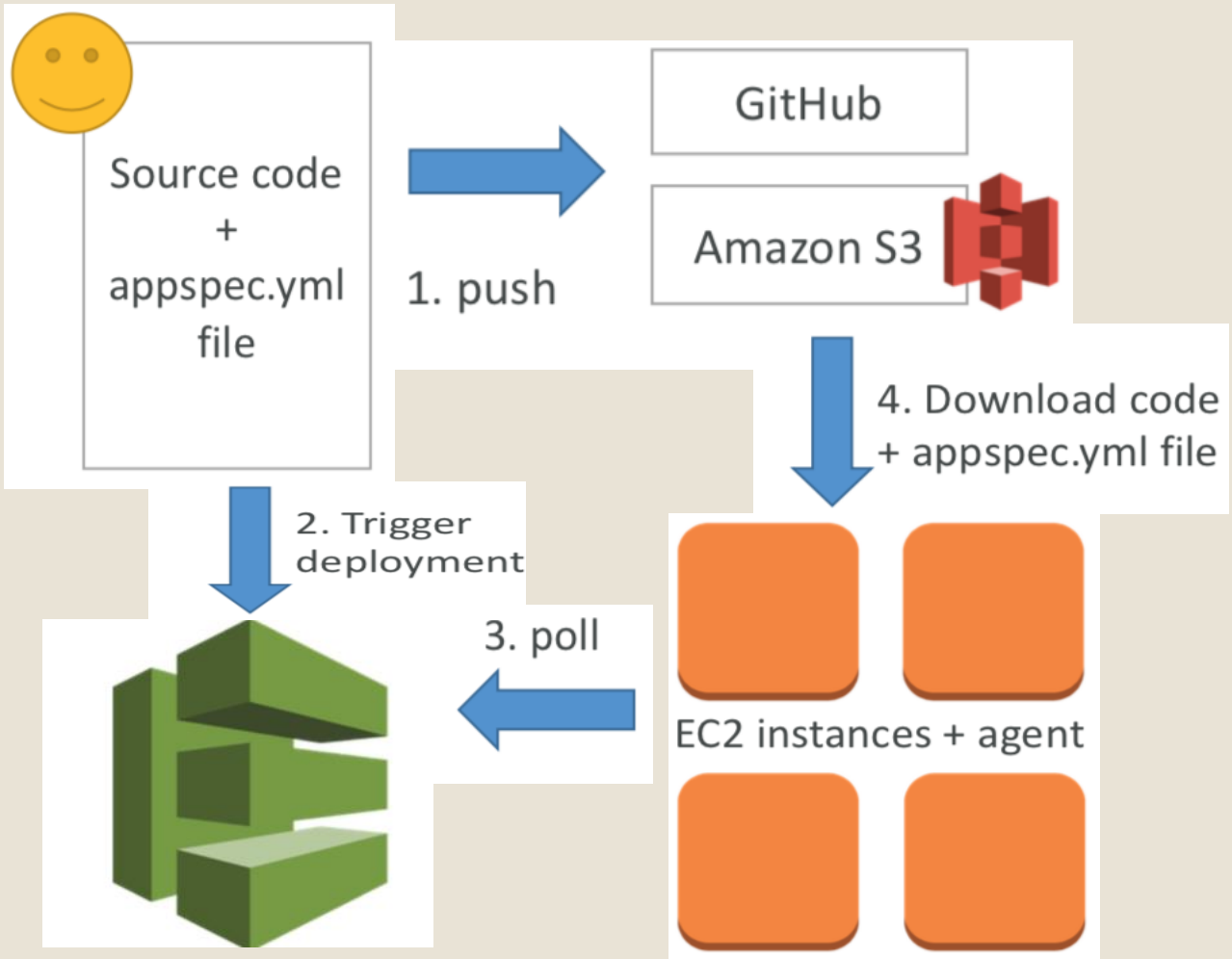
AWS CODEDEPLOY

- We want to deploy our application automatically to many EC2 instances
- There are several ways to handle deployments using open source tools (Ansible,Terraform, Chef, Puppet, etc…)
- We can use the managed Service AWS CodeDeploy

AWS CODEDEPLOY-STEPS

- Each EC2 Machine (or On Premise machine) must be running the CodeDeploy Agent
- The agent is continuously polling AWS CodeDeploy for work to do
- CodeDeploy sends appspec.yml file.
- Application is pulled from GitHub or S3 or CodeCommit
- EC2 will run the deployment instructions
- CodeDeploy Agent will report of success / failure of deployment on the instance

AWS CODEDEPLOY PROCESS



AWS CODEDEPLOY

- EC2 instances are grouped by deployment group (dev / test / prod)
- Lots of flexibility to define any kind of deployments
- CodeDeploy can be chained into CodePipeline and use artifacts from there
- CodeDeploy can re-use existing setup tools, works with any application, auto scaling integration
- Note: Blue / Green only works with EC2 instances (not on premise)
- Support for AWS Lambda deployments, EC2
- CodeDeploy does not provision resources

CODEDEPLOY – APPSPEC.YAML

```yaml
version: 0.0
os: linux
files:
  - source: /
    destination: /var/www/html/WordPress
hooks:
  BeforeInstall:
    - location: scripts/install_dependencies.sh
      timeout: 300
      runas: root
  AfterInstall:
    - location: scripts/change_permissions.sh
      timeout: 300
      runas: root
  ApplicationStart:
    - location: scripts/start_server.sh
    - location: scripts/create_test_db.sh
      timeout: 300
      runas: root
  ApplicationStop:
    - location: scripts/stop_server.sh
      timeout: 300
      runas: root
```

LAB - DEPLOYING A SAMPLE WEB APPLICATION

- Create a new Application
- Create Development Deployment Group
- Create Production Deployment Group
- Discuss Blue/Green Deployment Configuration
- Discuss appspec.yaml
- Monitoring Deployments with CloudWatch