Implementing Continuous Integration and Continuous Delivery

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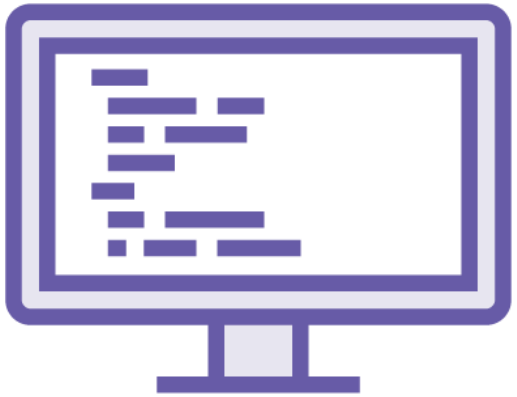
Understanding the DevOps Mindset

Cultural change, paradigm shift, collaboration

Improvement in software delivery

Eliminating silos between devs and IT Ops

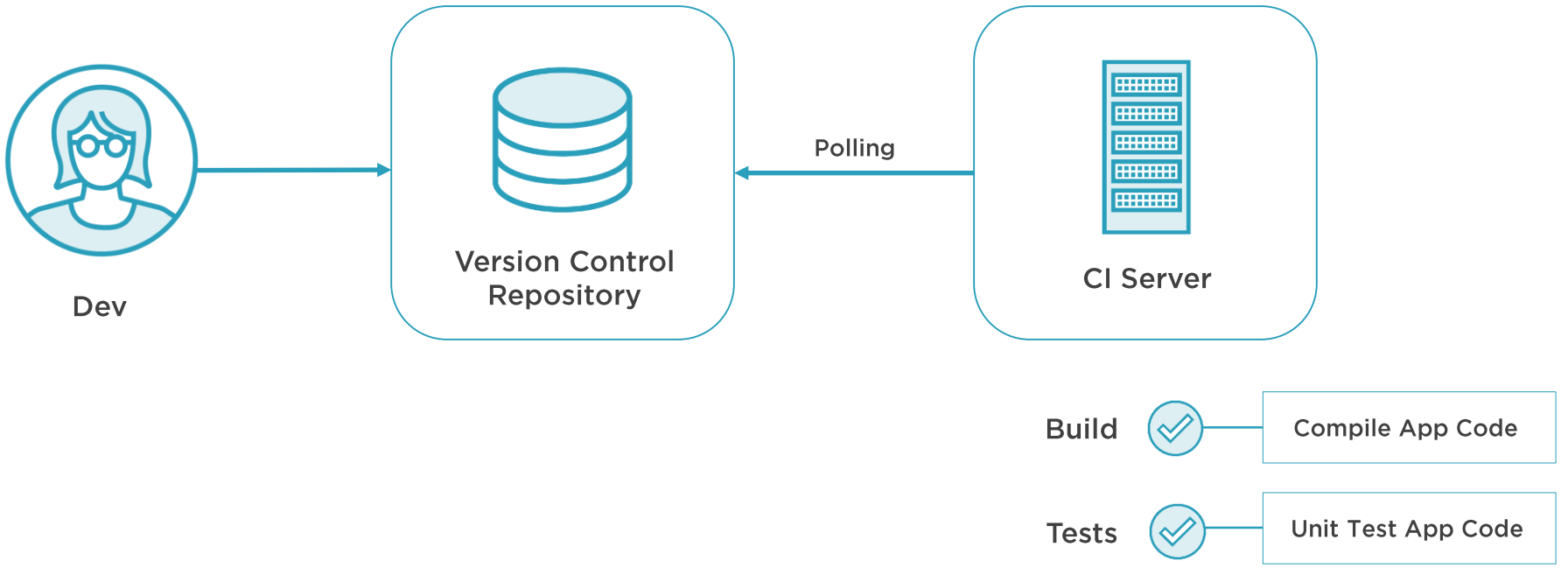


Dev practices applied to infrastructure

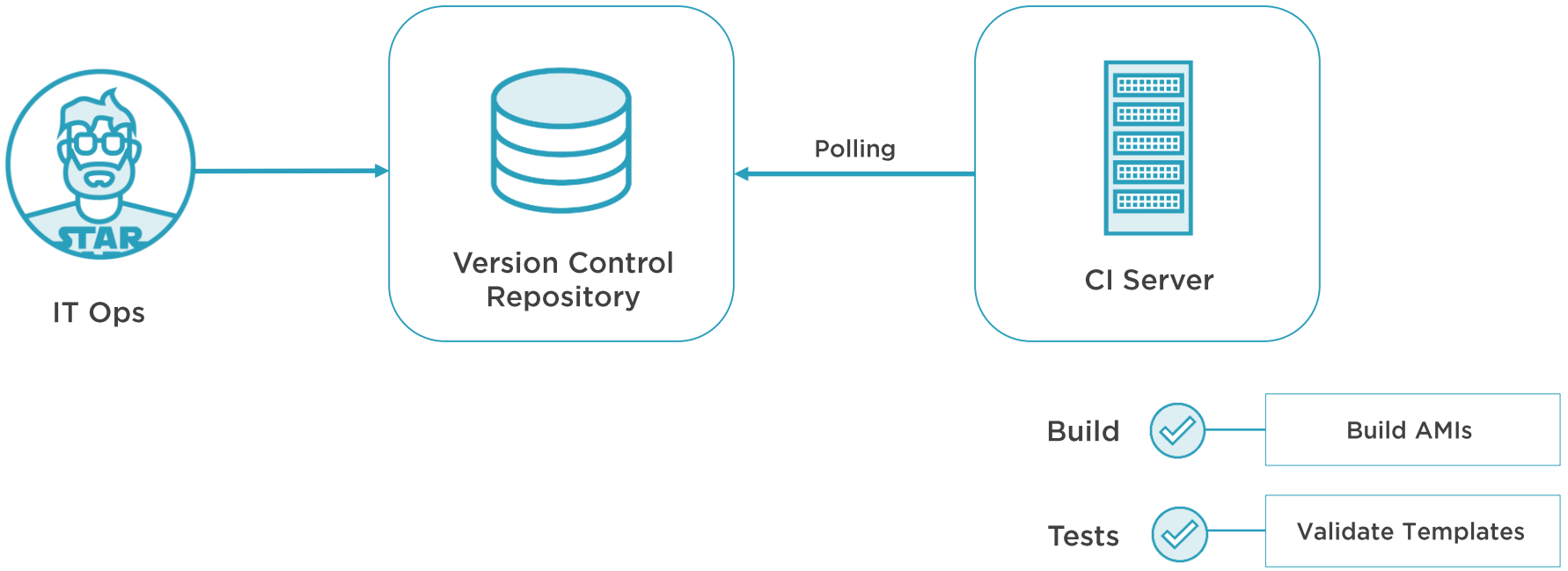
DevOps Principles

- Collaborate and work as one team
- Business and IT agility
- Complete automation
- Test & version application code
- Test & version infrastructure code
- Monitor & measure everything

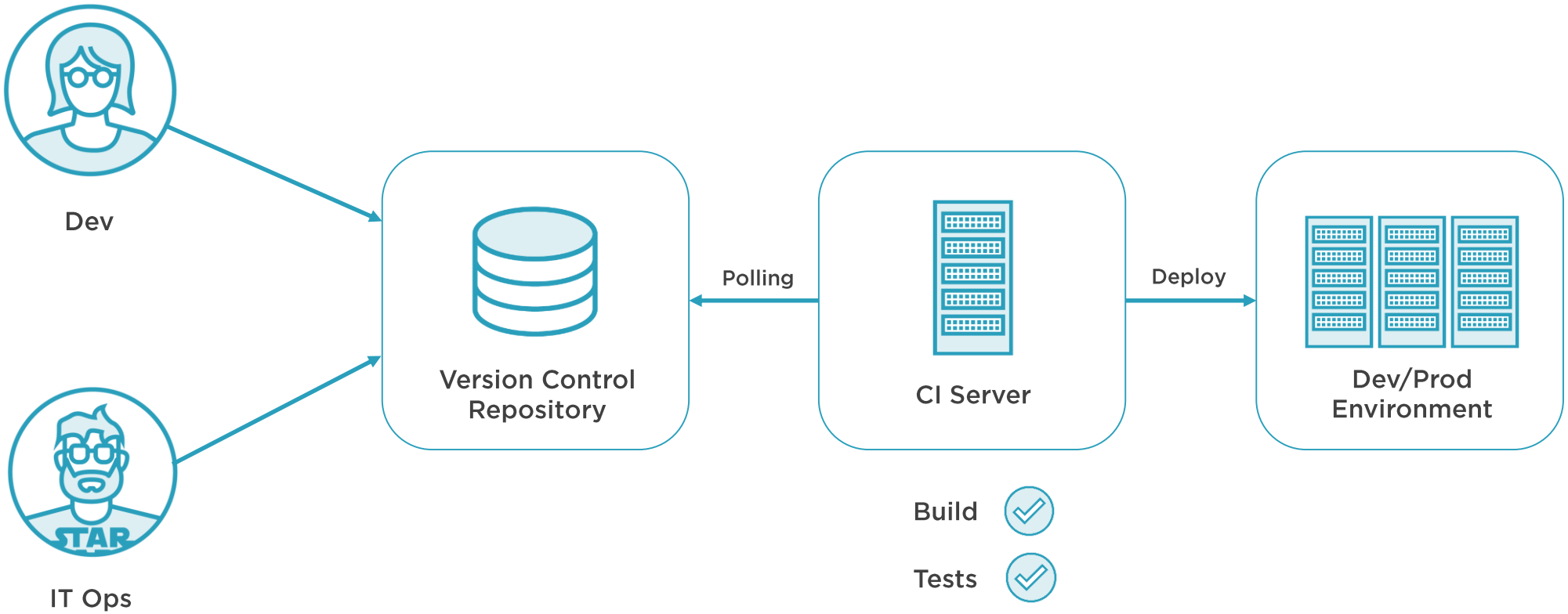
Continuous Integration (CI)



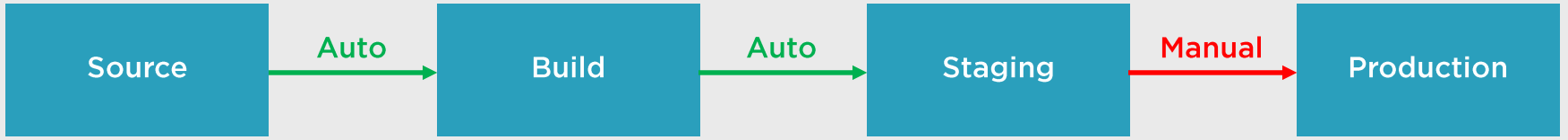
Continuous Integration (CI)



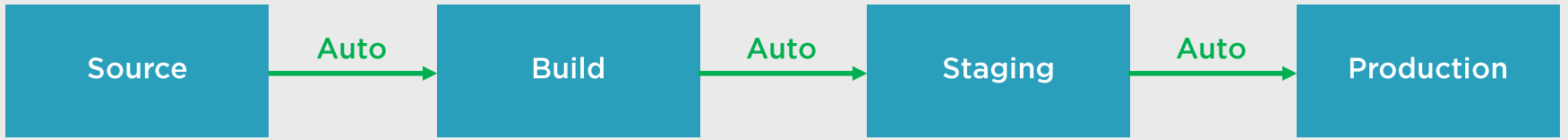
Continuous Delivery (CD)



Continuous Delivery



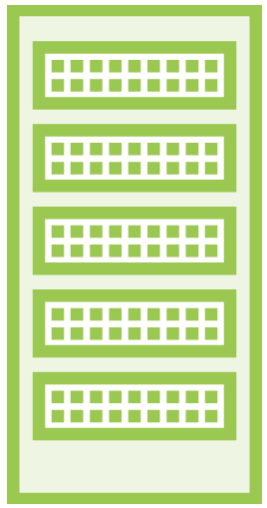
Continuous Deployment



Continuous Integration & Continuous Deployment Principles

- Automate everything
- Define infrastructure as code
- Store application and infrastructure code in version control
- Unify the application and the infrastructure
- Perform end-to-end automated testing

Infrastructure as Code



Repeatability
Humans make mistakes

Agility
Roll forward or roll back easily

Auditing & Security
Paper trail and permissions

Automation and Configuration Management

Provisioning

CloudFormation, OpsWorks, Beanstalk

Declarative

Loosely coupled to implementation

Configuration

Chef, Puppet, SaltStack, Ansible, DSC

Summary

- Collaboration
- Automation
- Versioning app and infrastructure code
- End-to-end automated tests