



DevOps: Bringing Development and Operations Together for Better Everything

Bryant Durrell

My DevOps Journey

- Ten years in Silicon Valley
- Ten years in MMOs
- And I'm finally figuring out how to do this job...

What's DevOps?

- Hot cliché of the moment!
- Job title!
- Just a way of thinking

Mind the Gap

- Tech Ops: those guys in the data center
 - Obstacles
- Engineers: those guys who write broken code
 - Problem causers

Sysadmins as Engineers

- Because infrastructure is code
 - (This is a lie, but it's a useful lie, so let's roll with it)
- Because configurations can be tested
- Because it brings us closer as a team

Bridging Cultural Gaps



Ancient History

- Altavista: 30 people on my team
 - 8 of them were the NOC
- Lots of problems with resentment
- So everyone got to take a NOC shift
- Later, engineers

Here and Now

- Scrum!
- Multi-disciplinary project-oriented teams
- Puts faces to names
- Brings everyone's concerns to the forefront

The Tech Ops Scrum

- That's not agile!
- Scrums are project-oriented, not group-oriented
- Technical Operations projects are no different

Tech Ops Project Scrums

- Datacenter Buildout
- Security
- Infrastructure Design

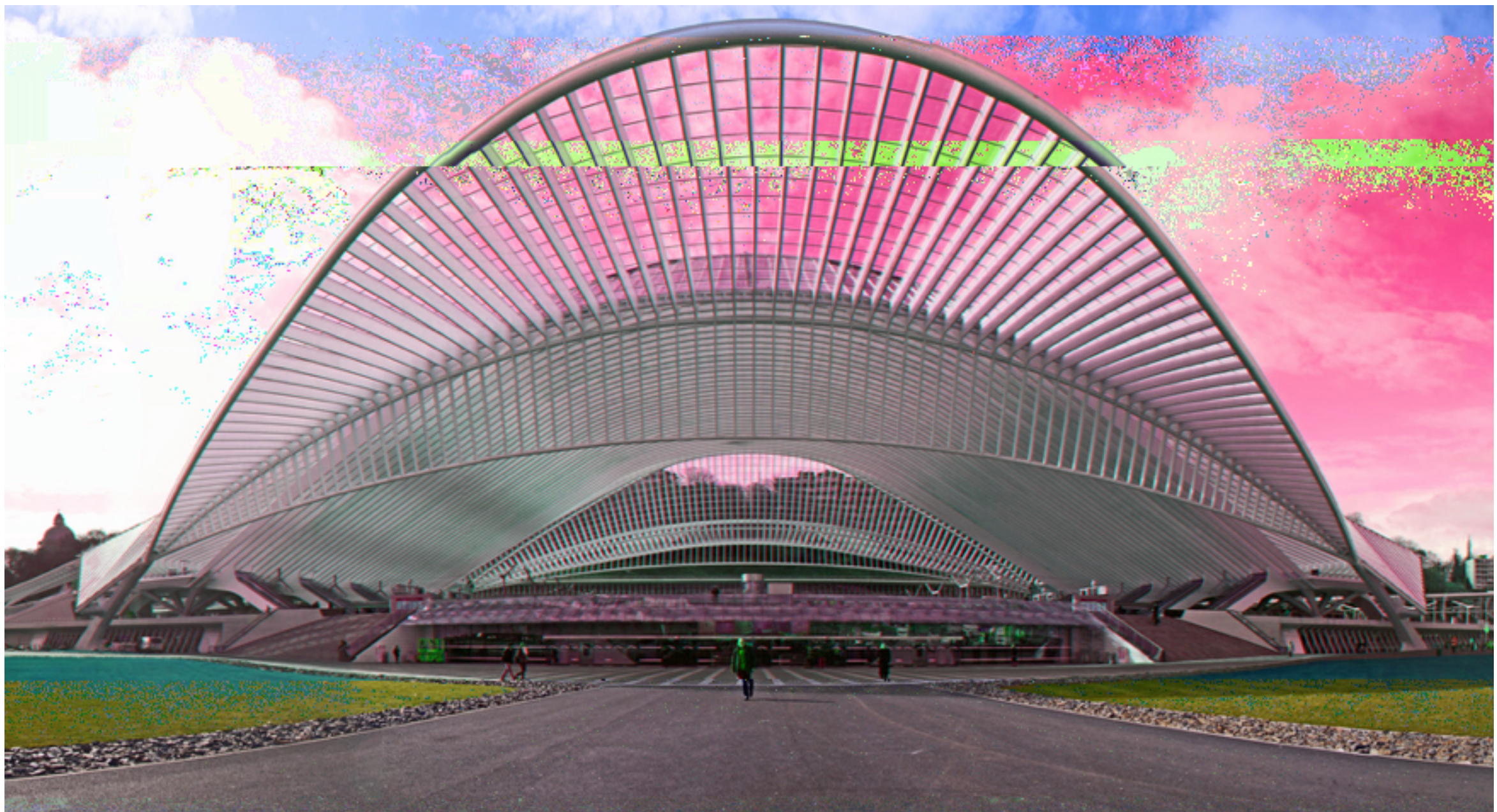
Tech Ops In Your Scrum

- Huge benefits even if your tech ops guys are just observers
- Even better if they're pigs
- Tech Ops Scrum of Scrums
- Is this your final answer? Nah.

That's Not a Project

- Troubleshooting, scheduled maintenance, on-call issues
- Block off time during sprint planning
- Refine the model over time
- Log the work

Configuration as Code



Configuration Management

- Puppet, Chef, CFEngine, KACE, Tivoli, etc.
- Define configuration once, apply automatically
- Physical hardware, VMs, cloud

So What?

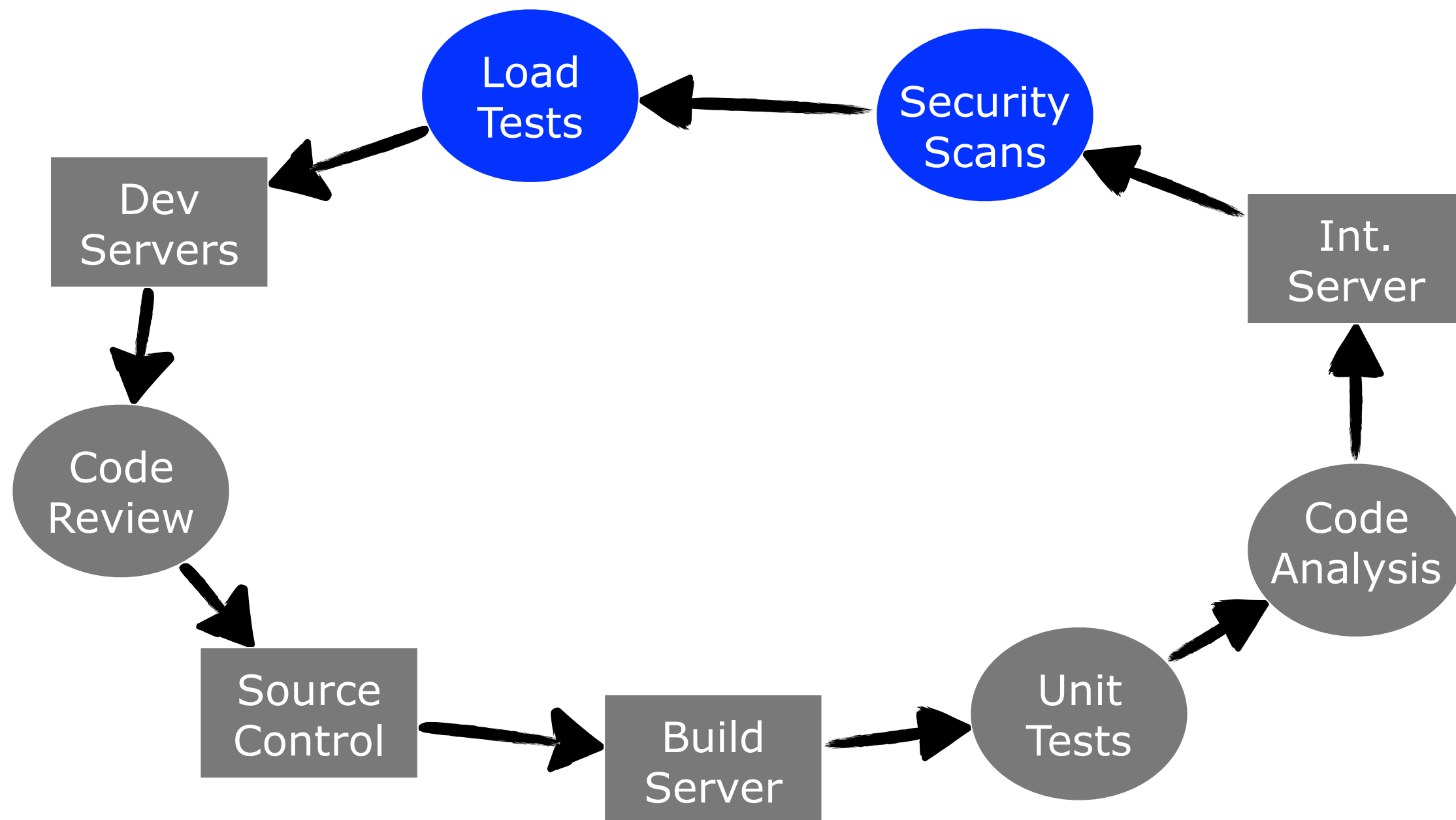
- Your automated OS installs run puppet at the end of the install
- Press a button, come back in ten minutes, enjoy your new system
- This works in clouds, on VMs, and on physical servers

So What, DevOps?

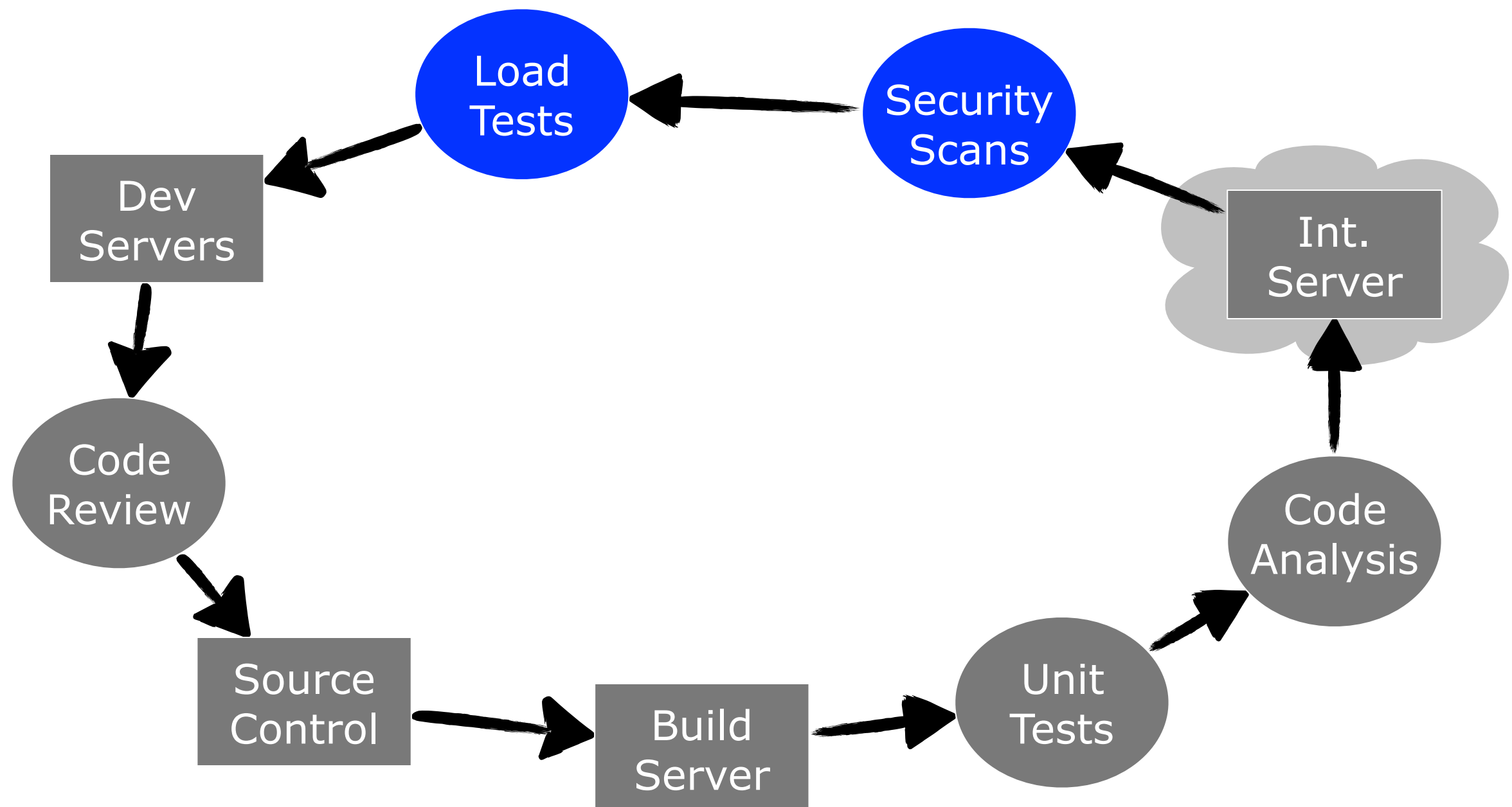
- Configuration is code
- Everything lives in source control
- Everything goes through continuous integration
- Hand-rolled changes will get reverted
- Programmatic scaling

Continuing

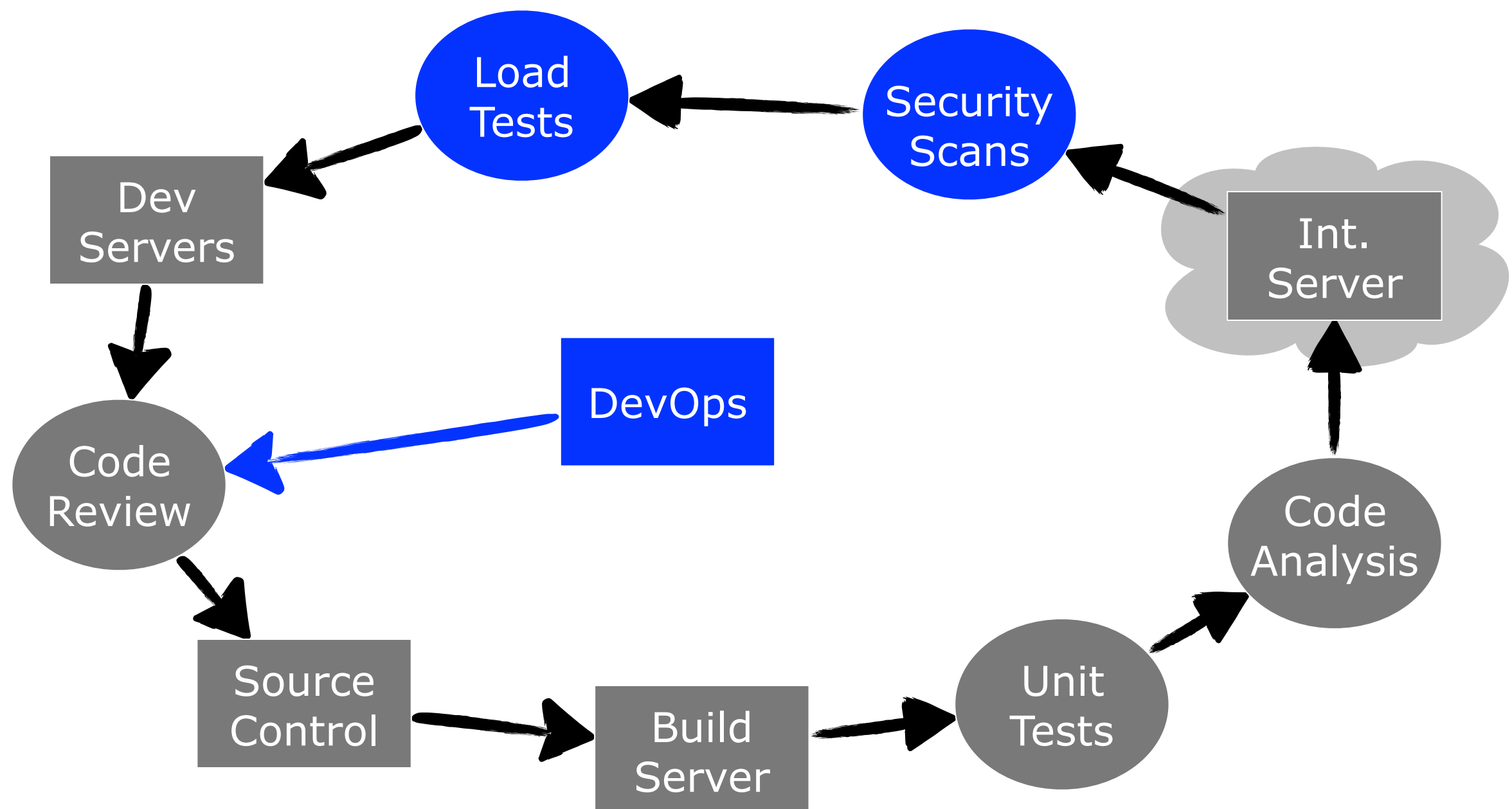
Continuous Integration



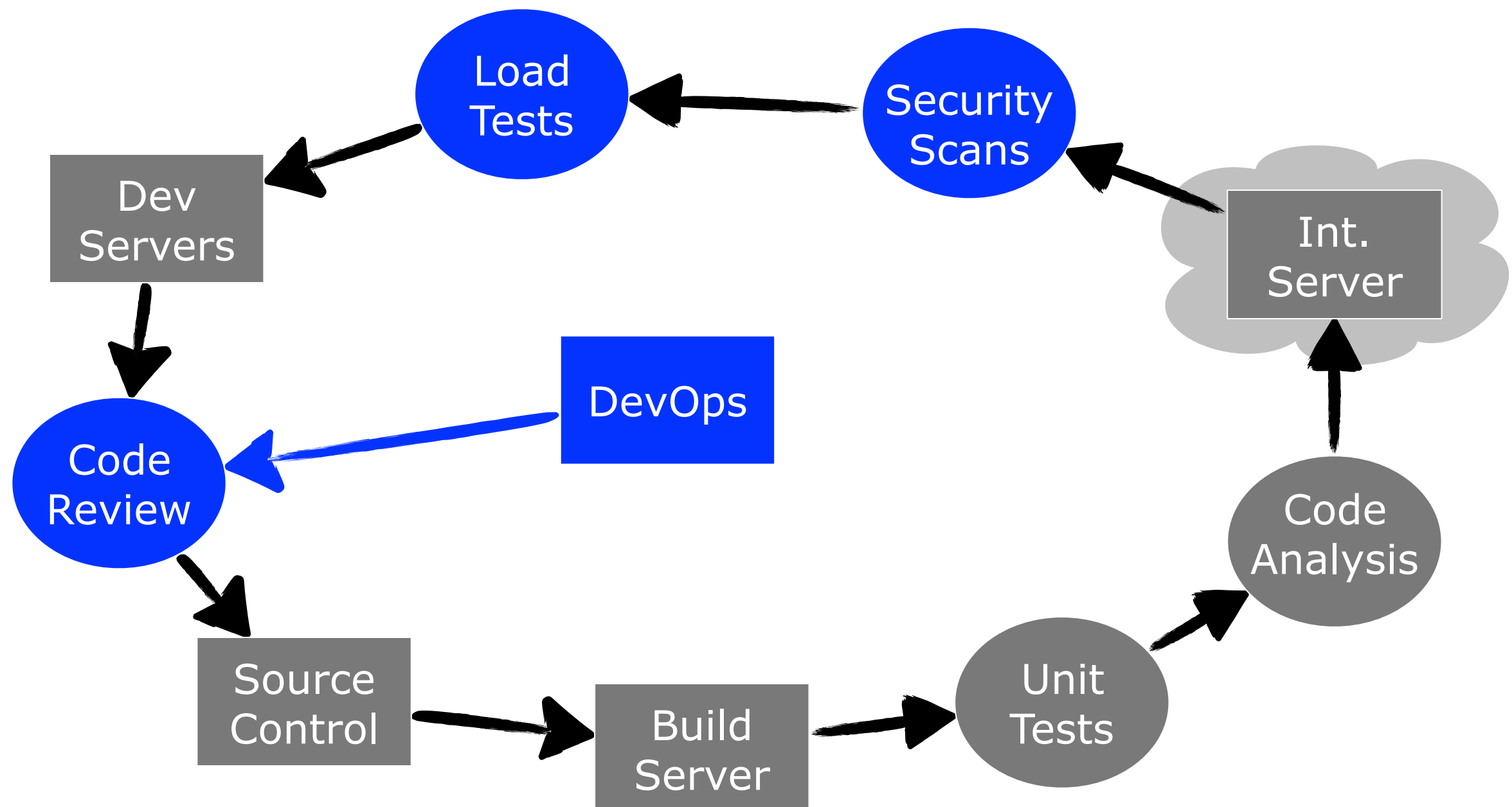
Continuous Integration



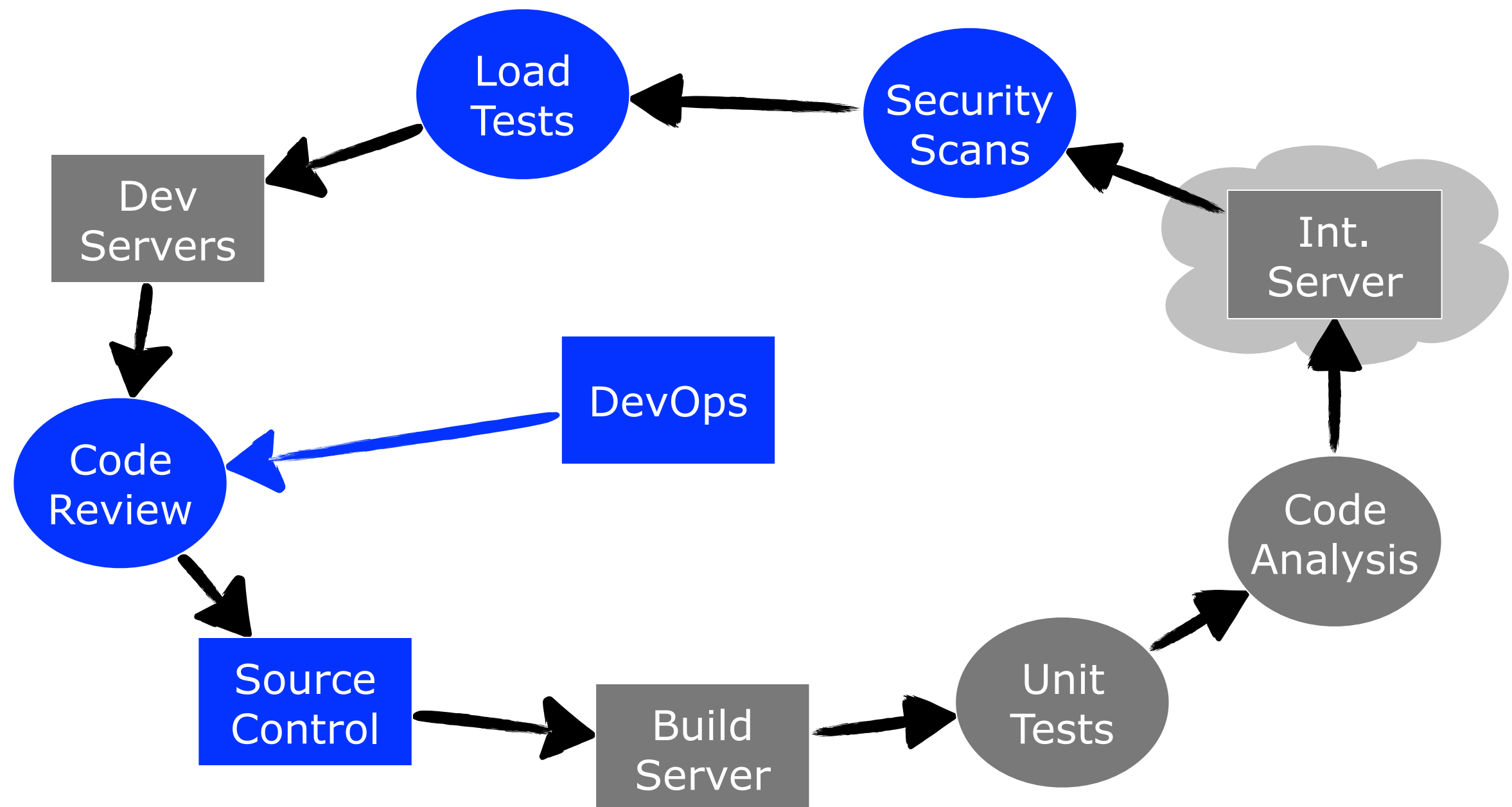
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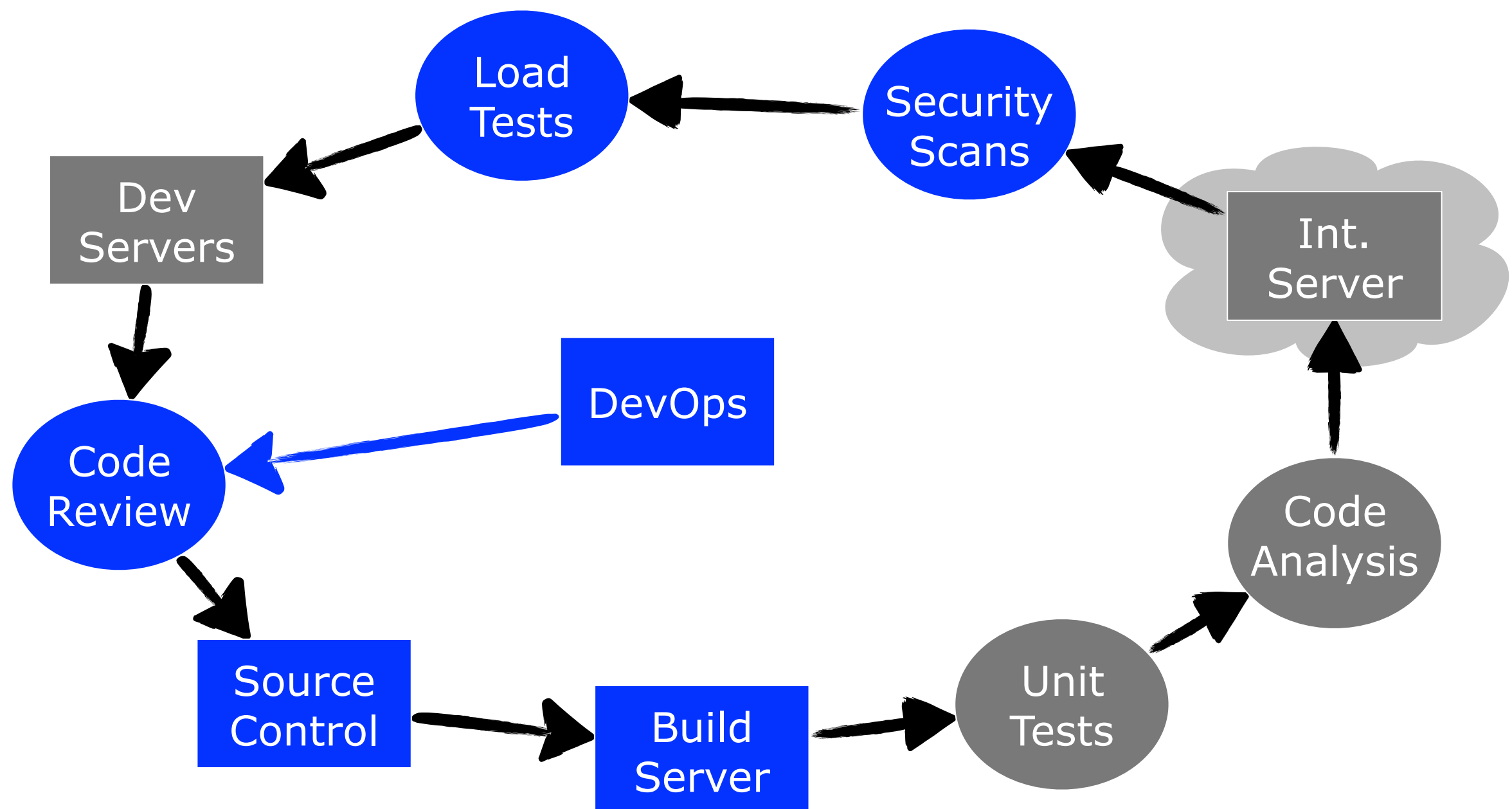
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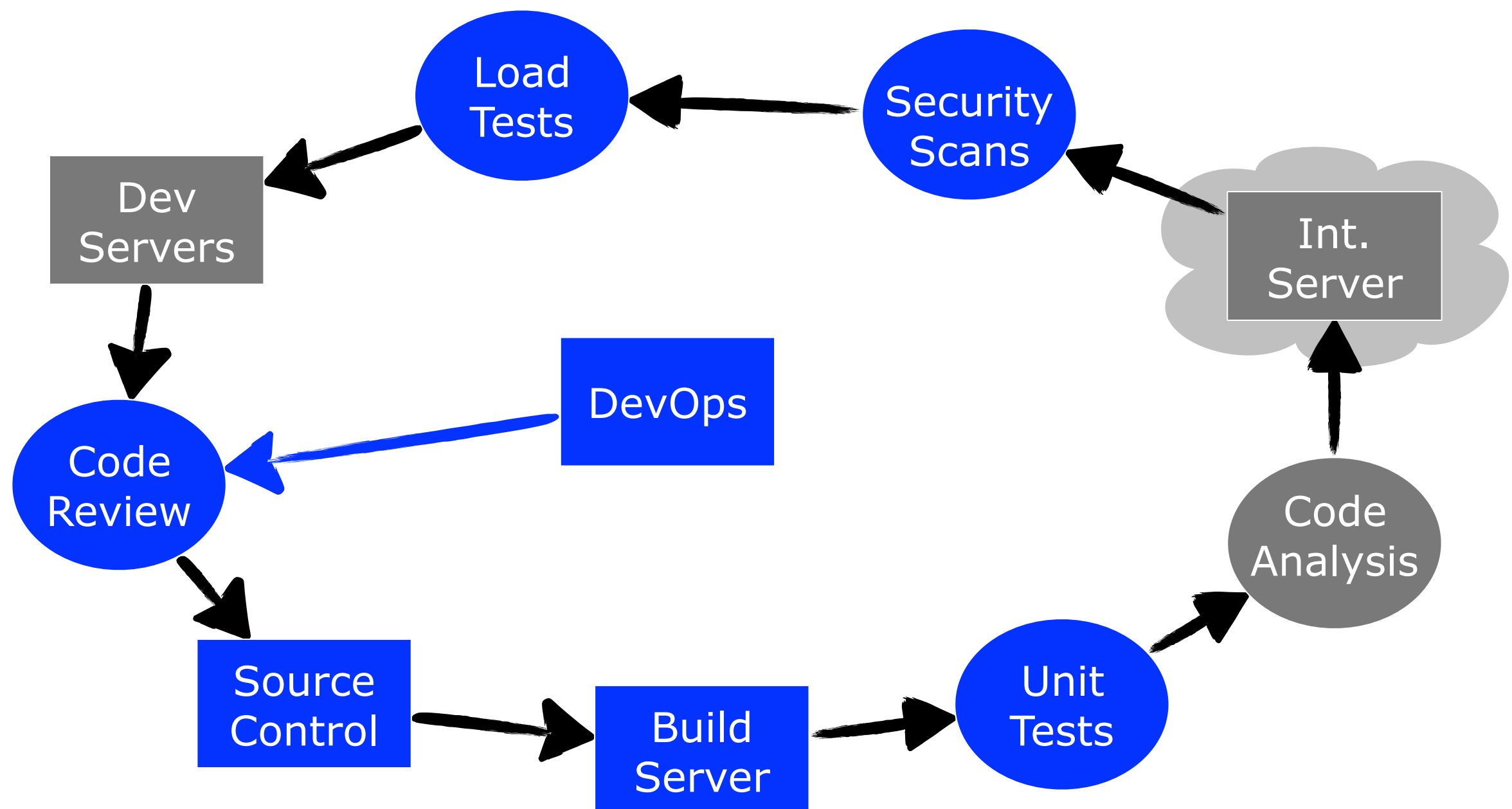
Continuous Integration



Continuous Integration



Continuous Integration



Desktops and Vagrant

- Julien Hamaide, Fishing Cactus
- Thursday, 11:30, Room 15

Change Management



Types of Change

- Scheduled changes
- Urgent changes
- Routine changes

Change Advisory Board

- Goal: understand the changes you're making
- Members: everyone!
- Frequency: weekly (Friday afternoon, Monday morning)

CAB Agenda

- Review last week's urgent changes
- Review last week's scheduled changes
- Discuss next week's scheduled changes
- Discuss new routine changes

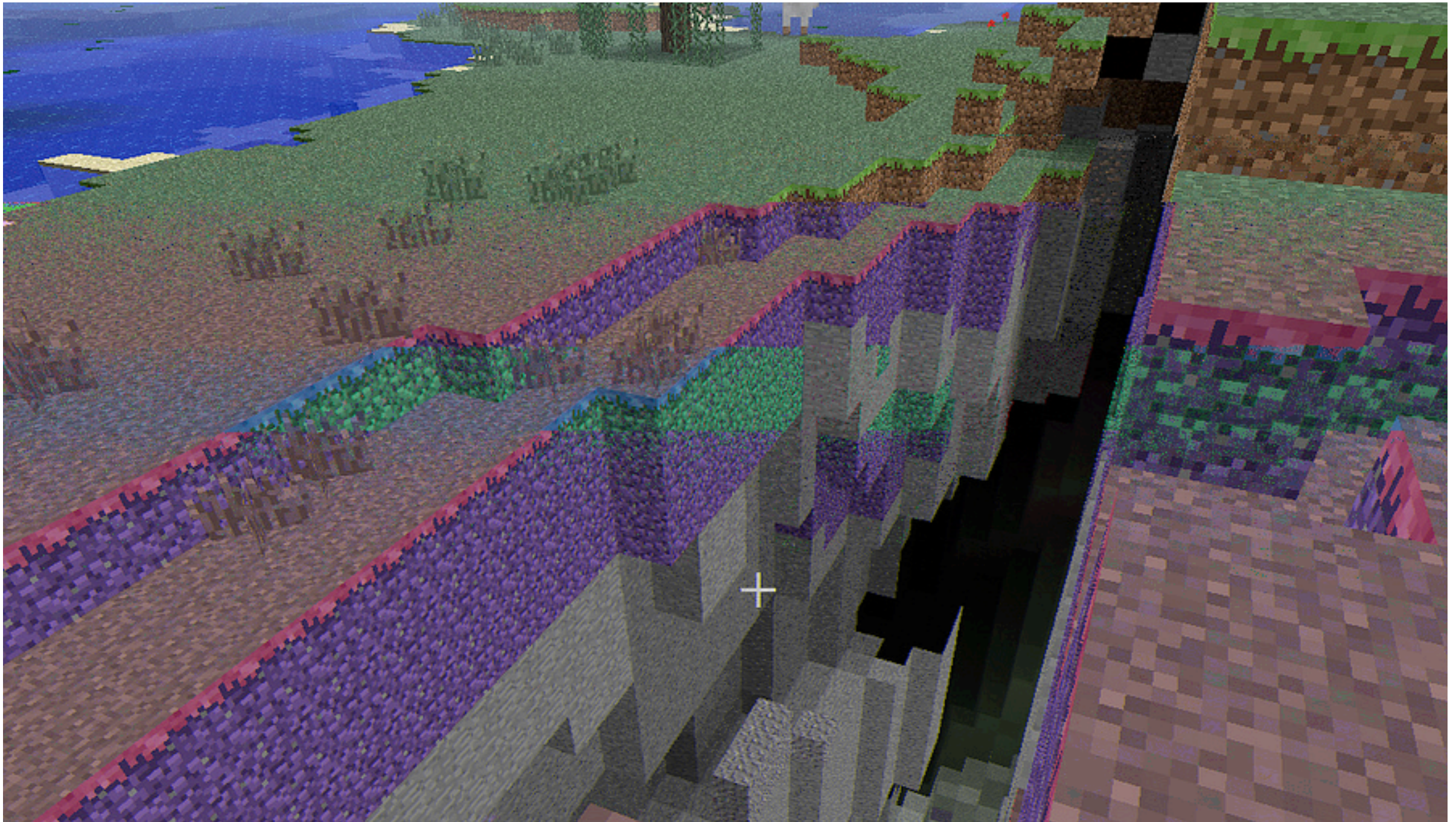
Three Factor Rating

- Risk: how dangerous is this change?
- Rollback: how bad is it to roll back?
- Reward: how much do we want to make this change?
- $\text{Risk} + \text{Rollback} < \text{Reward} \times 2$

Handling Urgent Changes

- If there's time, get the CAB in a room and go through the three factor rating
- If there's not time, talk about it on a conference call
- If there's really not time, do it
- Notify the CAB immediately in any case

Resources



Books

- *Web Operations: Keeping the Data on Time* (Allspaw and Robbins)
- *The Visible Ops Handbook* (Beher, Kim, and Spafford)

Blogs

- Planet Devops (<http://www.planetdevops.net>)
- High Scalability (<http://highscalability.com/>)
- Code as Craft (<http://codeascraft.etsy.com/>)

Mailing Lists

- Devops Weekly (<http://devopsweekly.com/>)
- Devops Toolchain (devops-toolchain@groups.google.com)

Events

- devopsdays (<http://devopsdays.org/>): worldwide
- Surge (<http://omniti.com/surge/>): Baltimore
- Velocity (<http://velocityconf.com/>): Santa Clara, Europe, China
- Look for local user groups

Questions?

- durrell@innocence.com
- <http://cogs.innocence.com/2012/10/gdc-online-2012>
- Fill out your comment form!

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