DevOps: Bringing Development and Operations Together for Better Everything

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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 cliche 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.

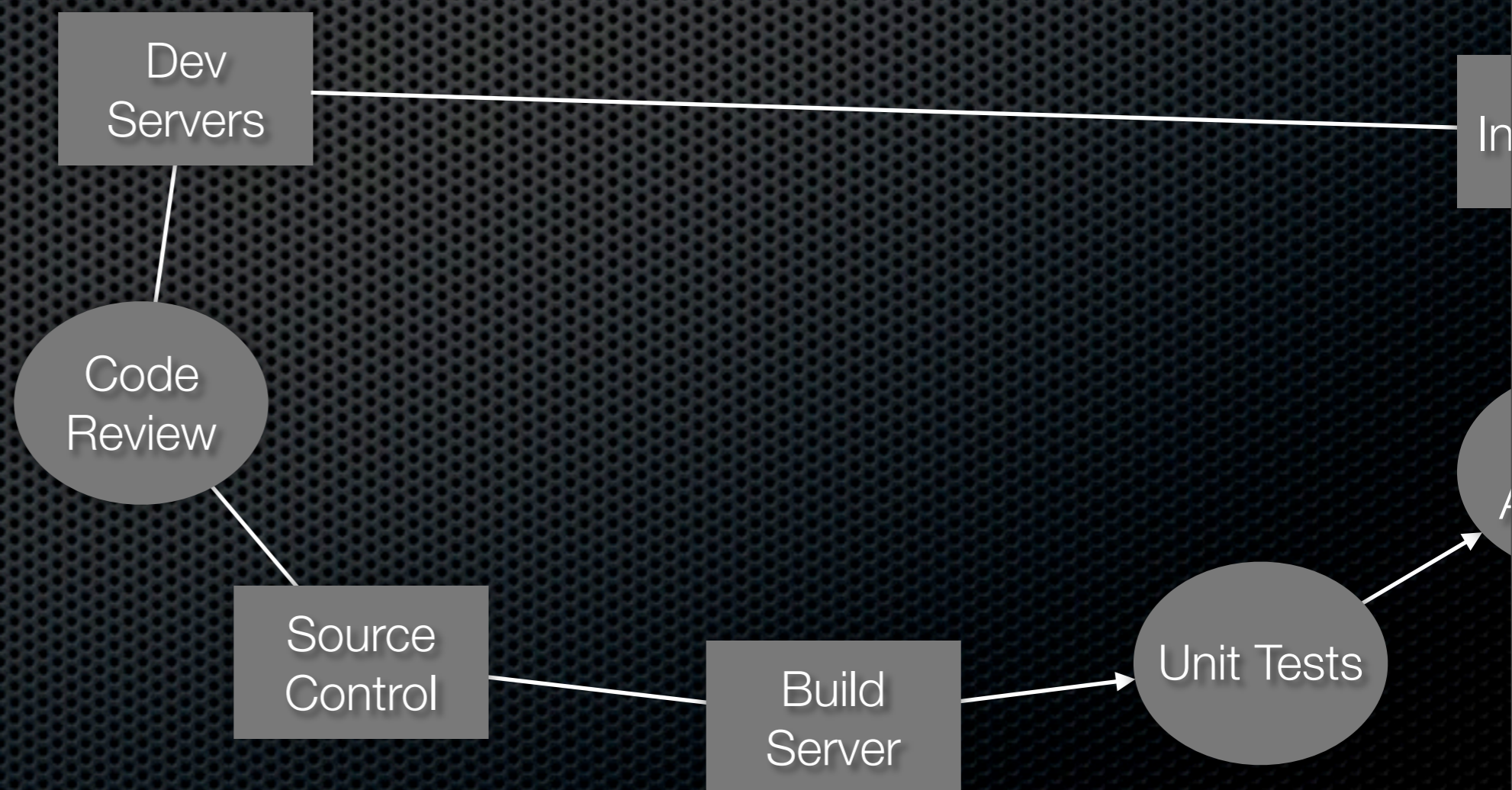- Define configuration once, apply automatically

- 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
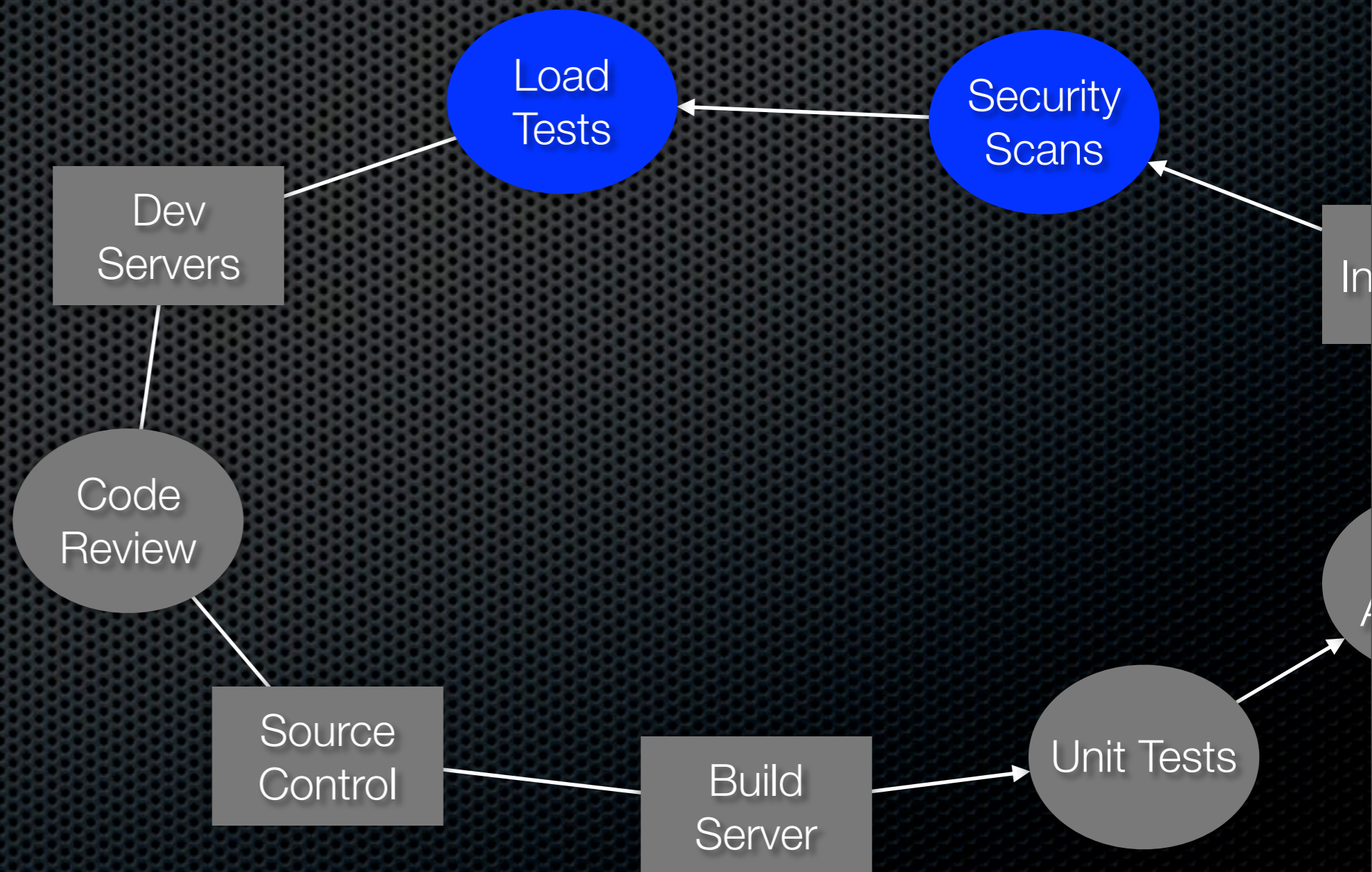
- This works in clouds, on VMs, and on physical servers

So What, DevOps?

- Configuration is code

- Everything lives in source control

- Everything goes through continuous integration

- Hand-rolled changes will get reverted

- Programmatic scaling

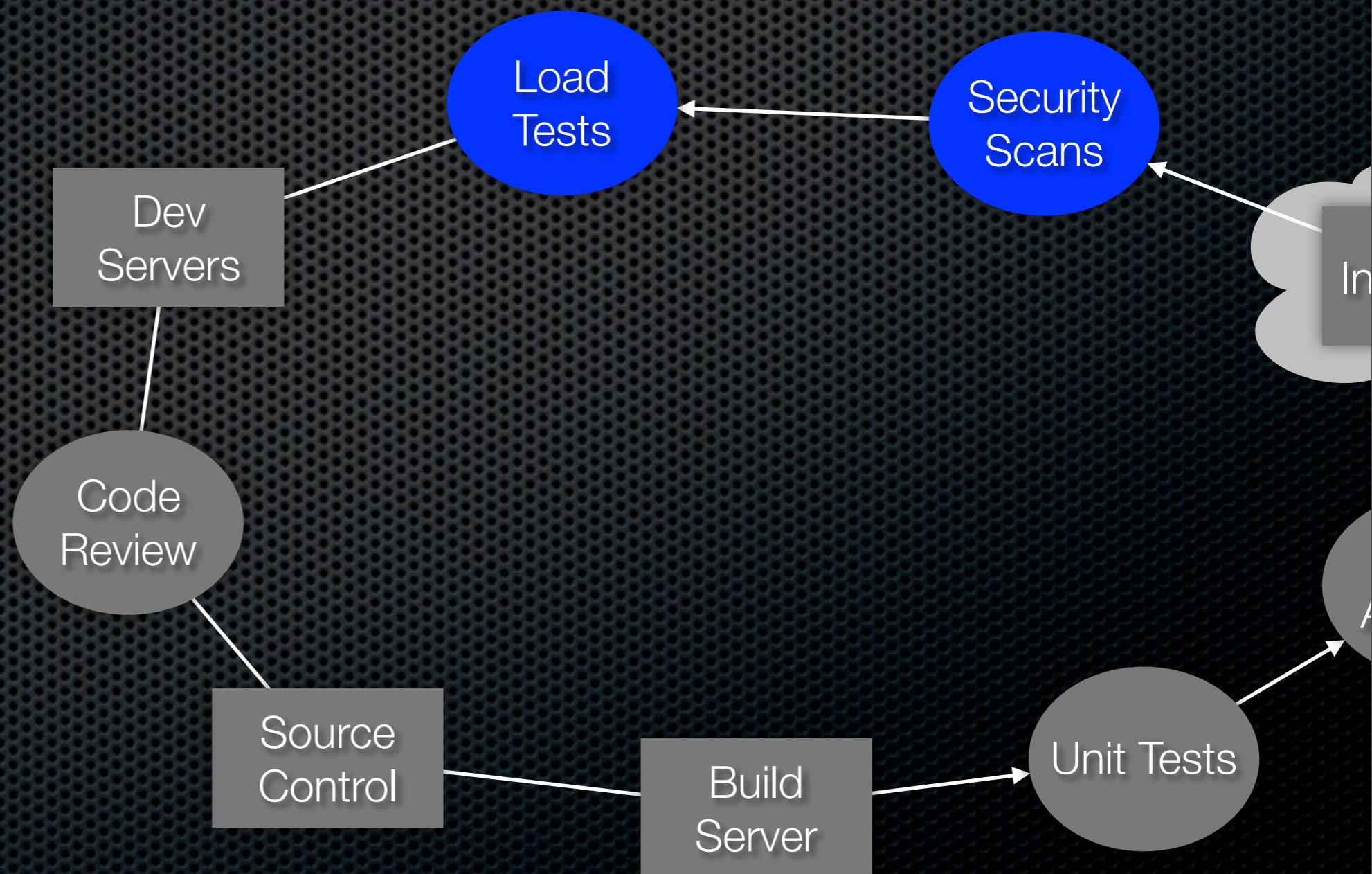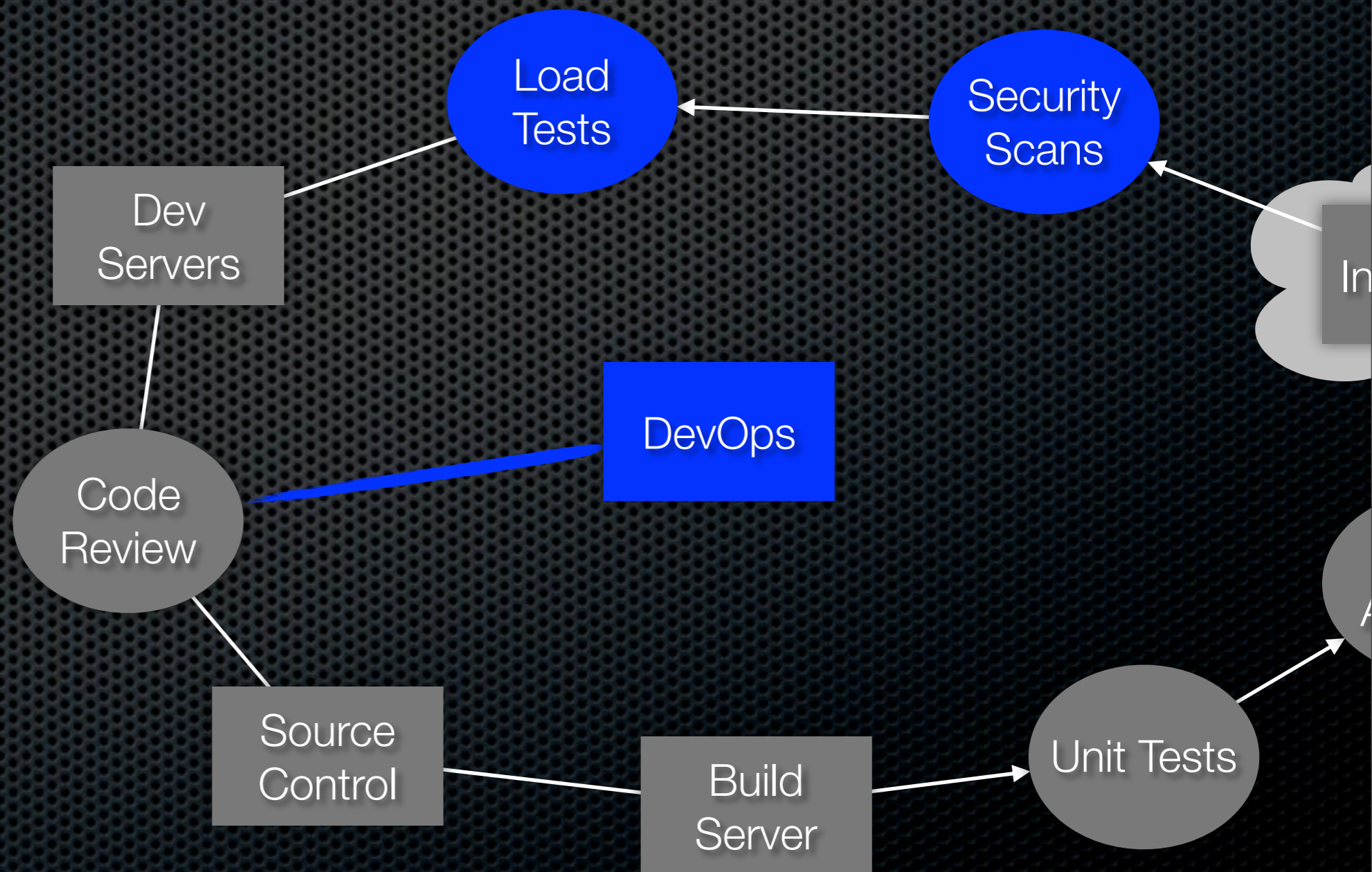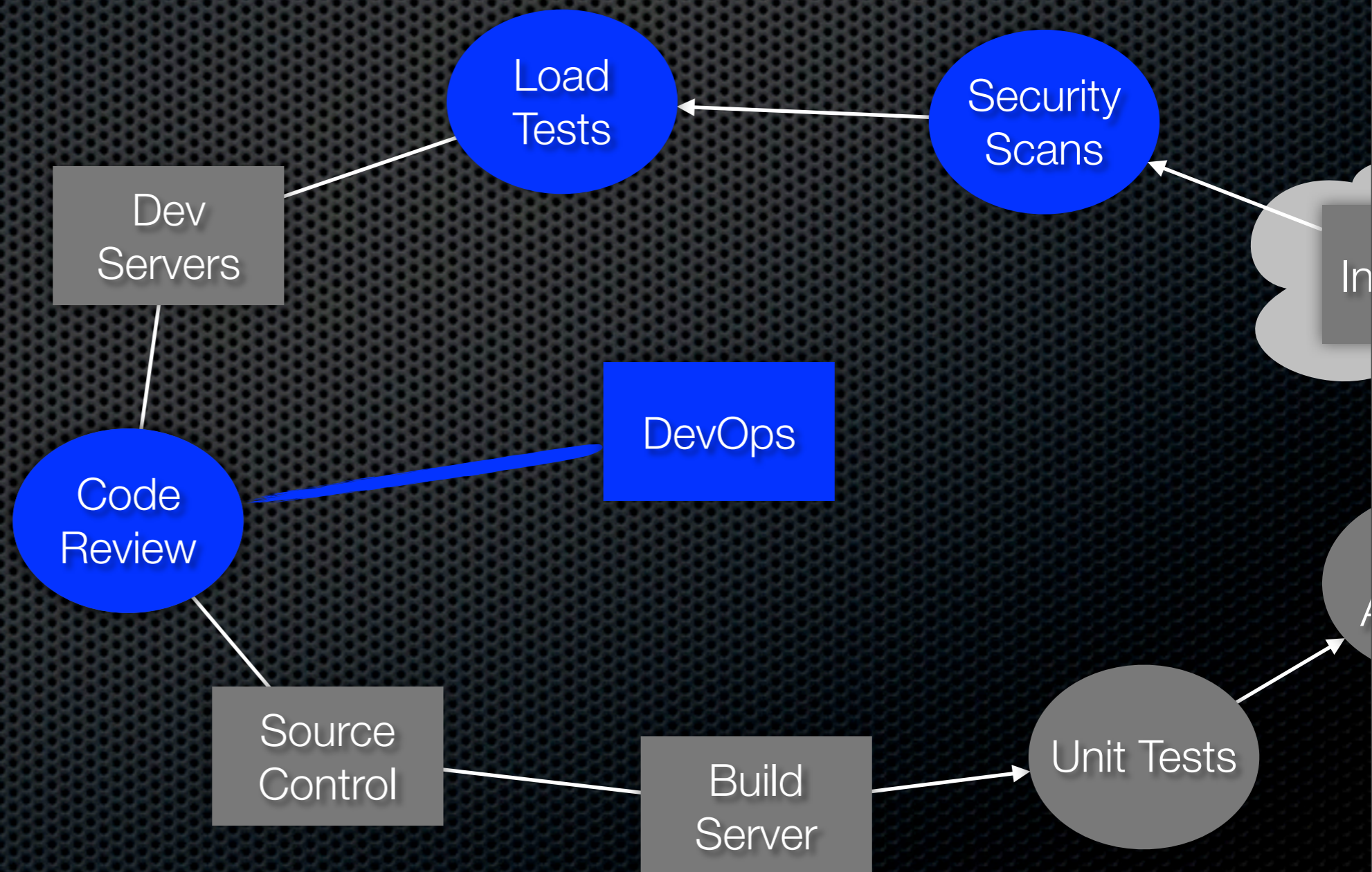# Continuous Integration

Continuous Integration

Continuous Integration

Continuous Integration

Load Tests

Security Scans

Dev Servers

In

DevOps

Code Review

A

Source Control
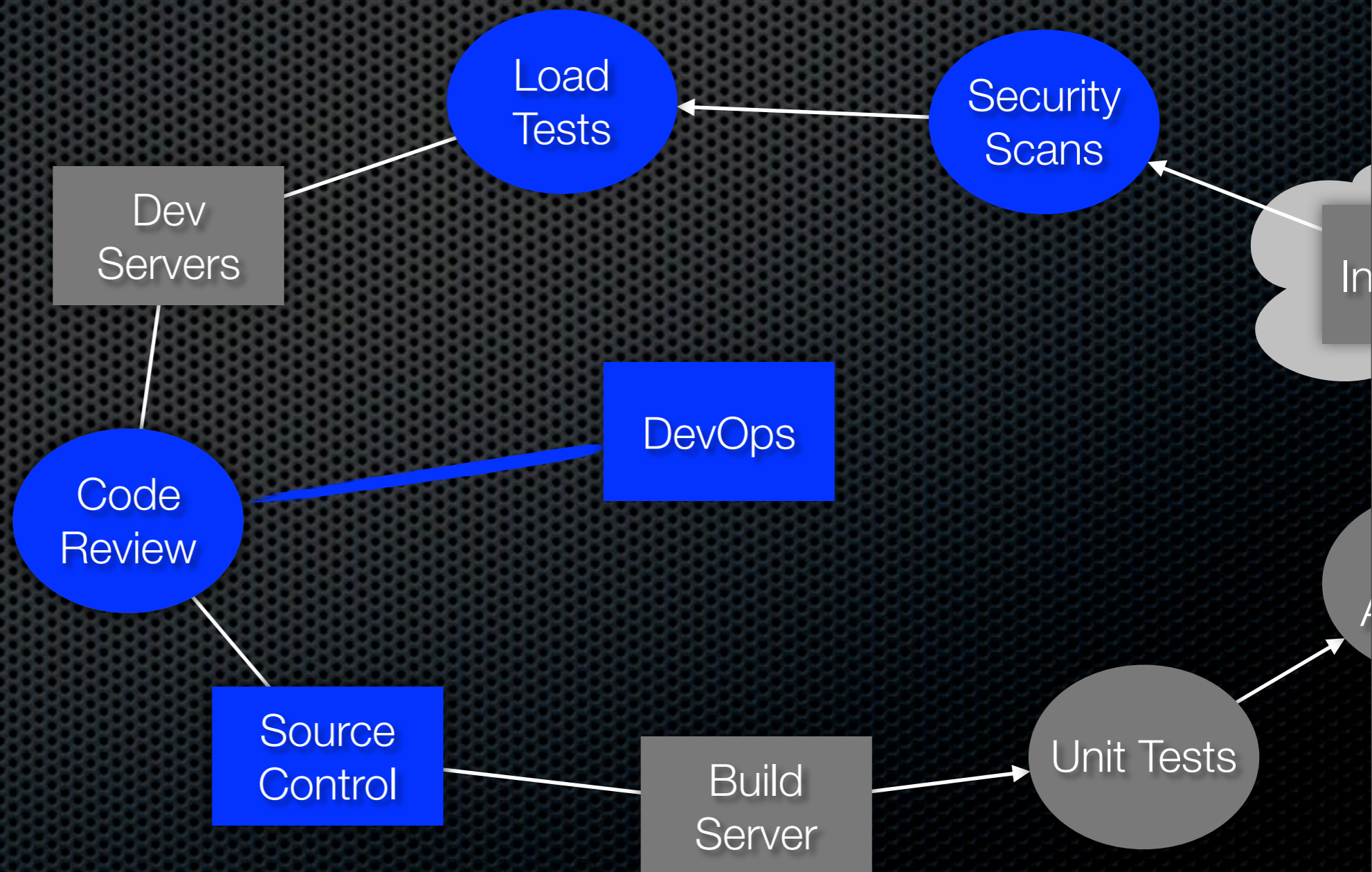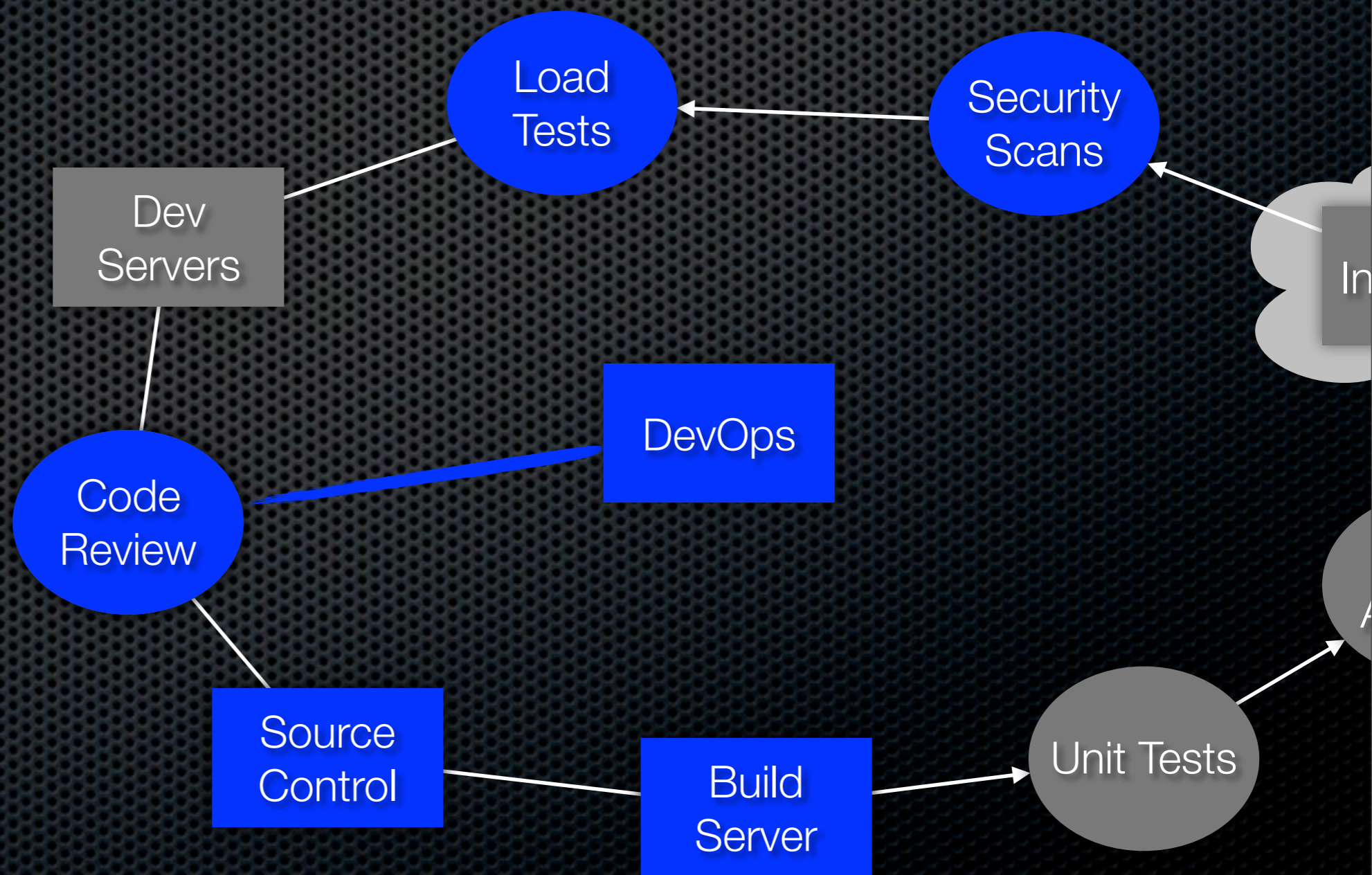
Build Server

Unit Tests

Continuous Integration

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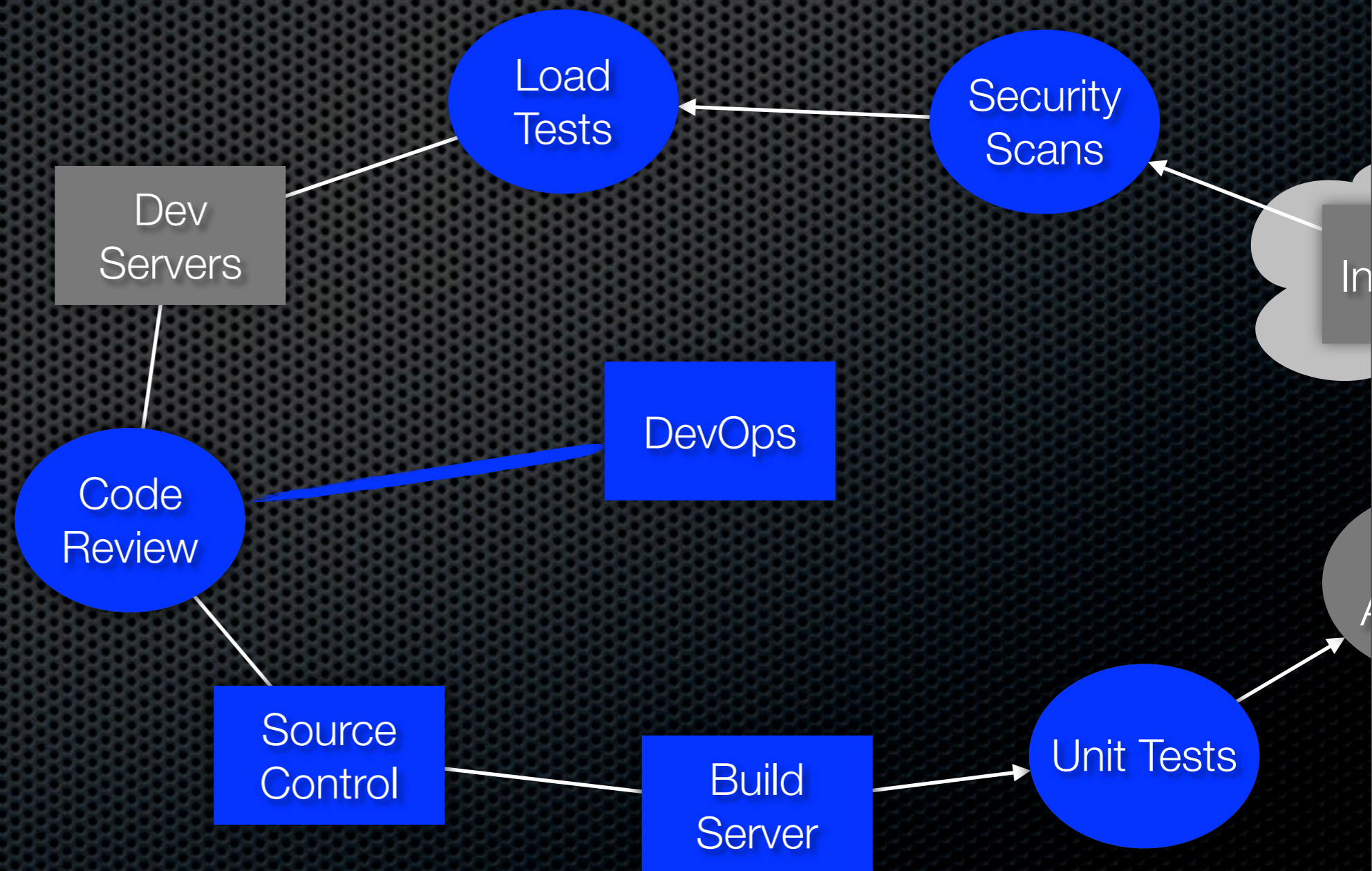
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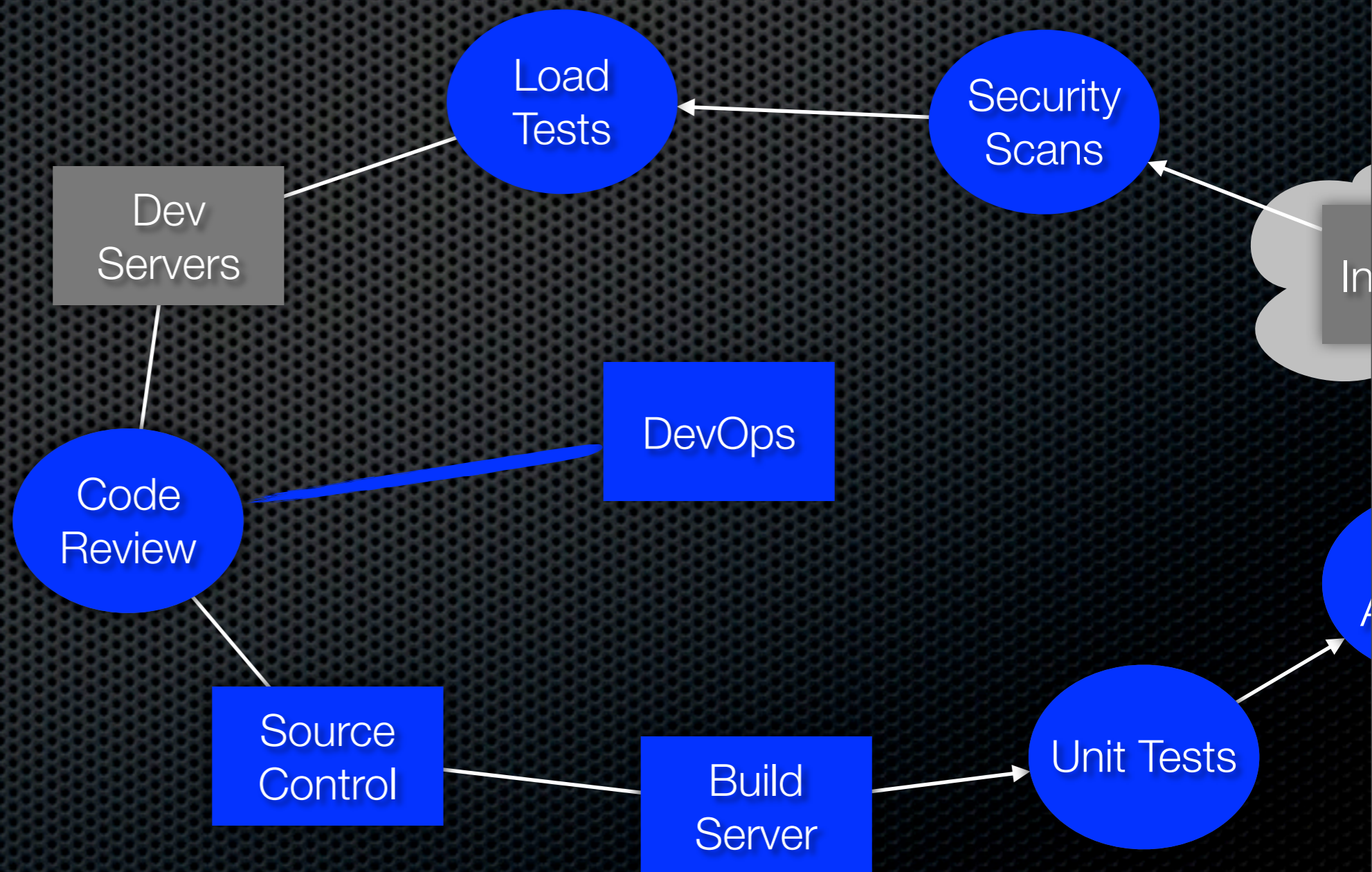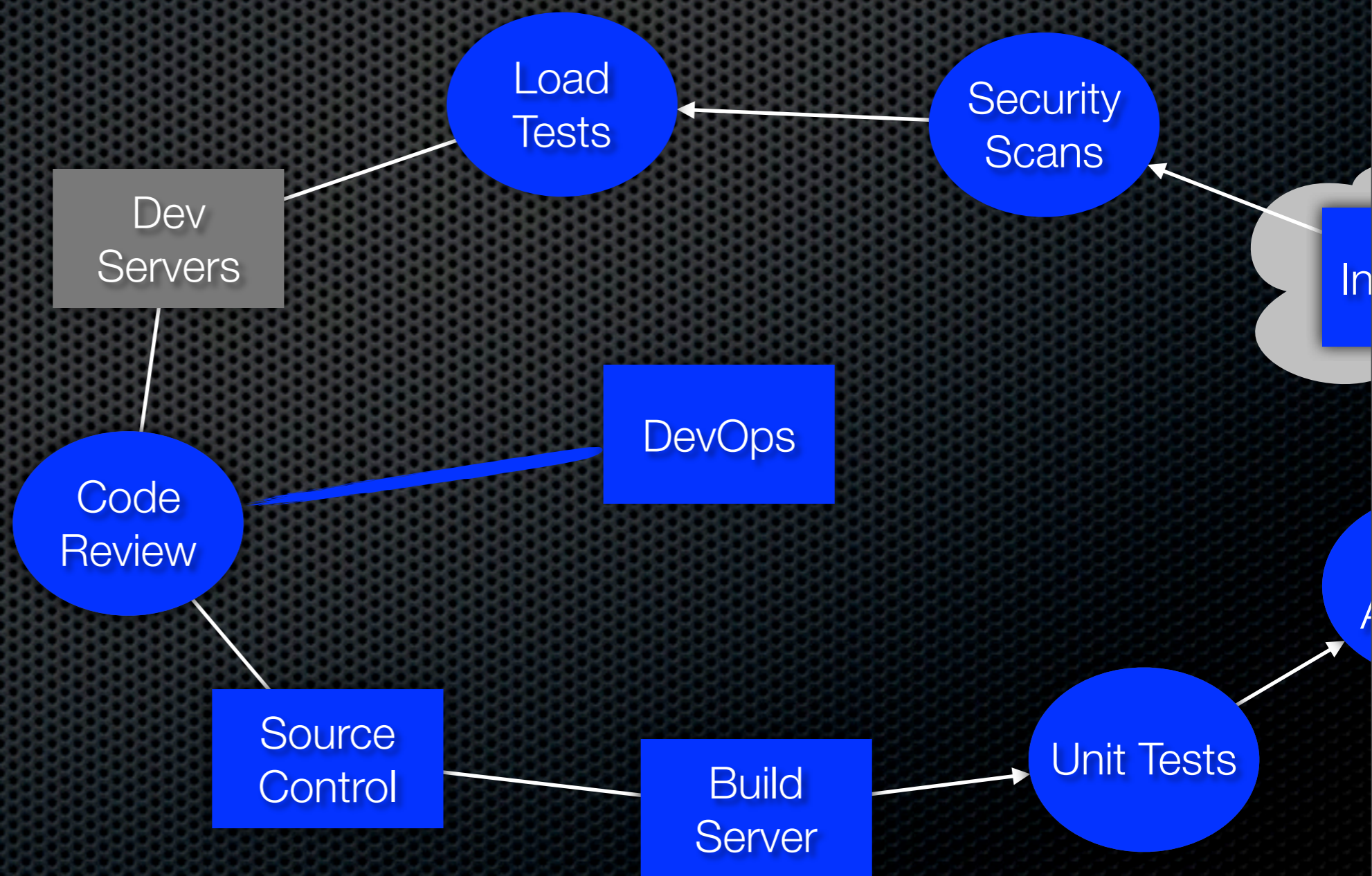
Change Management

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?

- Risk + Rollback < Reward x 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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