

A decorative header at the top of the slide features four overlapping spheres: a green one on the left, and blue, red, and yellow ones on the right. A thin black horizontal line is positioned below the spheres.

Release Engineering as More than a Part-time Pastime

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What does a Release Engineer Do?

- **Writes Makefiles**

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- Yells at the developers

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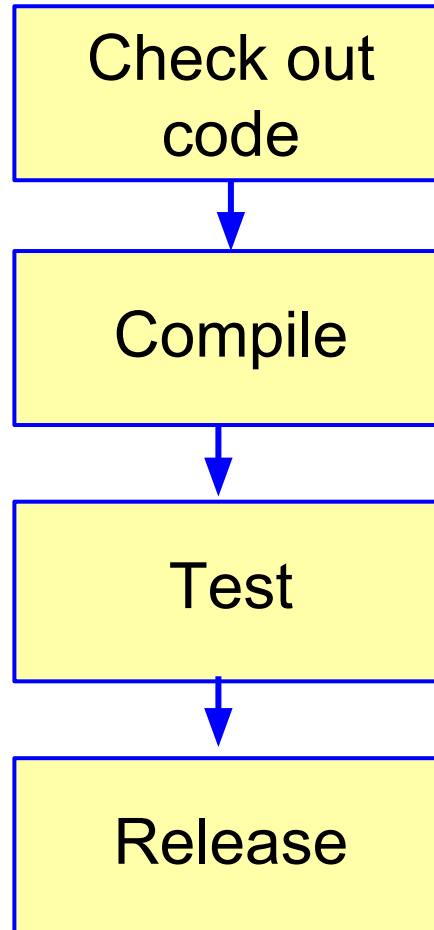


What does a Release Engineer Do?

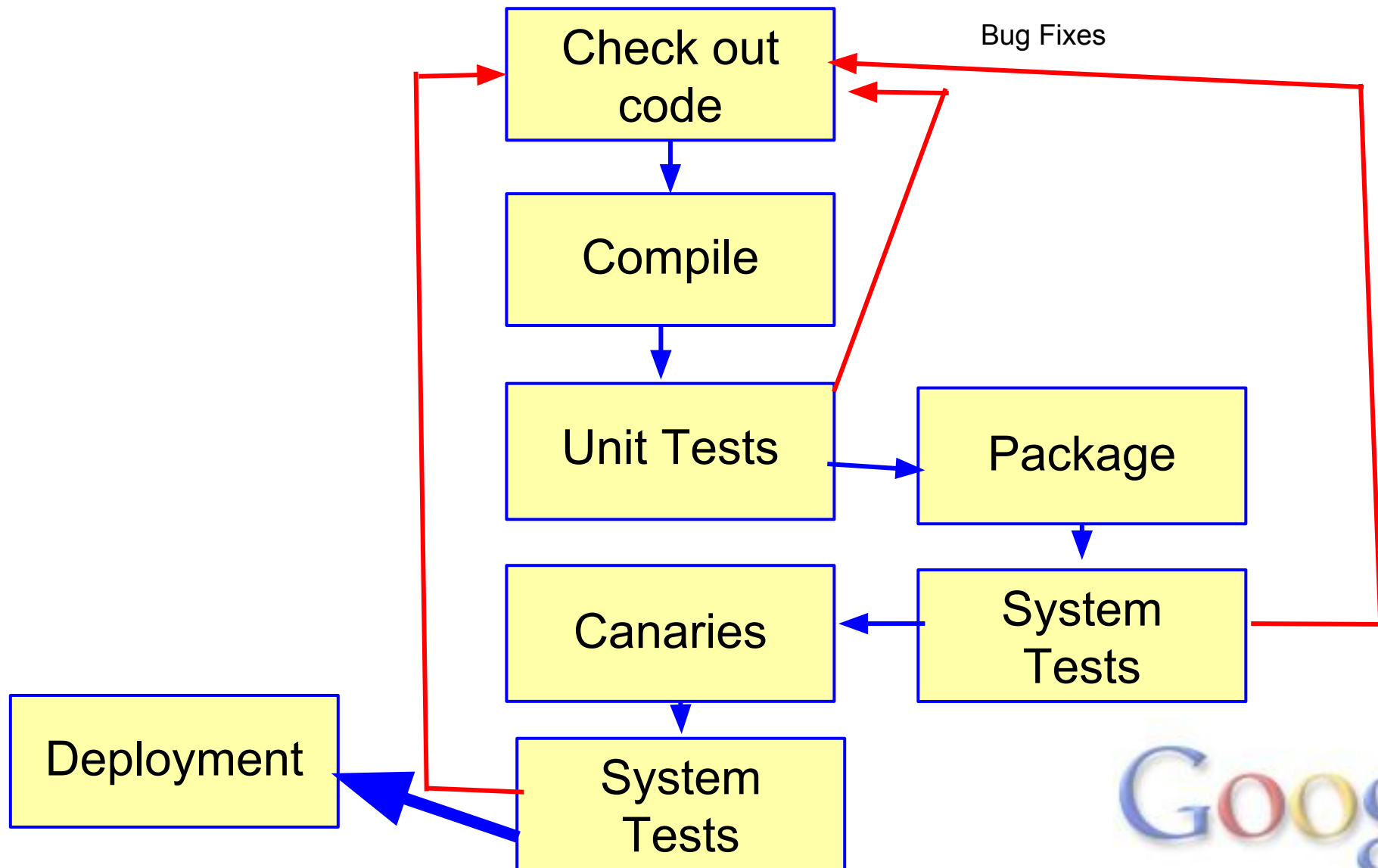
“Accelerates the path from development to operations”



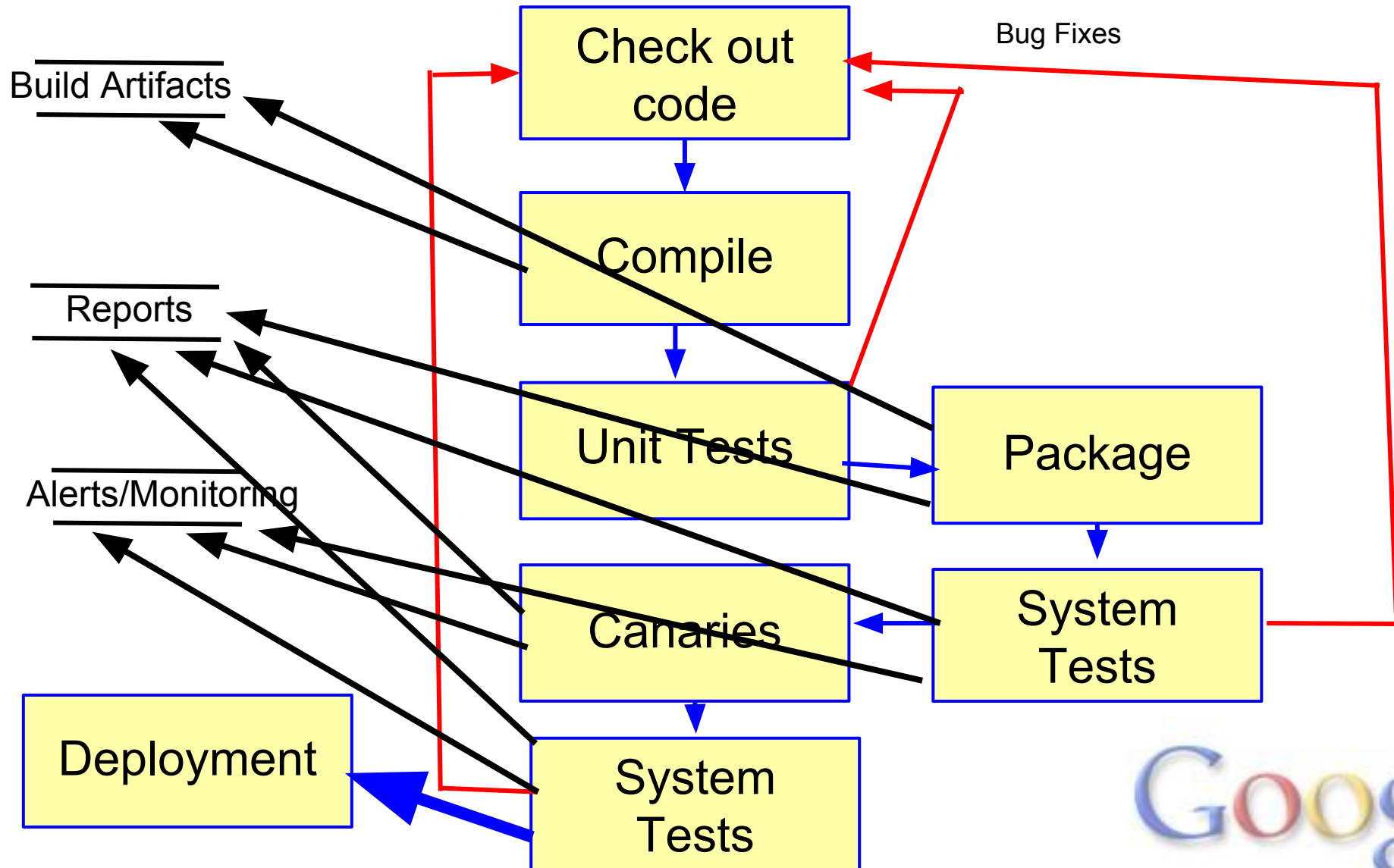
Steps in Release Process



The Real Process



The Real, Real Process



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“Release Engineering from the Beginning”



Release Engineering from the Beginning

- Cheaper to put good practices in place early
- Releng, developers, testers and SRES work together
- Releng must understand the intent of how the code should be built and deployed (and then help define the processes)
- No “Build and Pray”

Releng Building Blocks

- Source Code Management

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- Build Configuration Files

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- Automated Build System

Releng Building Blocks

- Source Code Management
- Build Configuration Files
- Automated Build System
- Build Identification Mechanism
 - Unique build strings
 - Ability to identify when/where/how a binary was built

Releng Building Blocks

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- Build Configuration Files
- Automated Build System
- Build Identification Mechanism
- Packaging

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Releng Building Blocks

- Source Code Management
- Build Configuration Files
- Automated Build System
- Build Identification Mechanism
- Packaging
- Deployment
- Reporting/Auditing
- Best Practices




End Results

- Continuous delivery of new products
- Early bug identification
- Repeatability
- Enforcement of policy and procedures
- Hermetic build process

Hermetic (Dictionary.com)

1. made airtight by fusion or sealing.
2. not affected by outward influence or power; isolated.
3. of, pertaining to, or characteristic of occult science, especially alchemy.

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So what does a
release engineer
do?????



Disciplines within Releng

- Automation and Execution
- Consultation and support
- Source code repository management
- Tools development
- Audit compliance
- Metrics
- Best Practices
- Deployment



Skills and tools - then

2004

- make, ant
- cvs, svn
- cruisecontrol, home grown scripts
- Machine-oriented build/deployment
- Scripting
- Sysadmin skills



Skills and tools - then and now

2004

- make, ant
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2014

- maven
- perforce and git
- Jenkins, Chef, Puppet, bamboo, buildbot, teamcity
- Container technology
- Object-oriented programming
- Sysadmin skills



The Future of Releng

- Industry-standards for:
 - job ladders and job descriptions
 - best practices
 - metrics
 - compliance
- College curriculums
- More solutions from vendors
 - end-to-end

And of course - conferences!

- Usenix Release Engineering Summit (URES) 2014
 - East - June 20, Philadelphia
 - West - November 10, Seattle
- IEEE RELENG 2014
 - April - Mountain View, CA
- Flowcon 2014
 - September 3-4, San Francisco

