



A Next-Gen Continuous Integration Solution to Improve Software Delivery

Arnold Bechtoldt

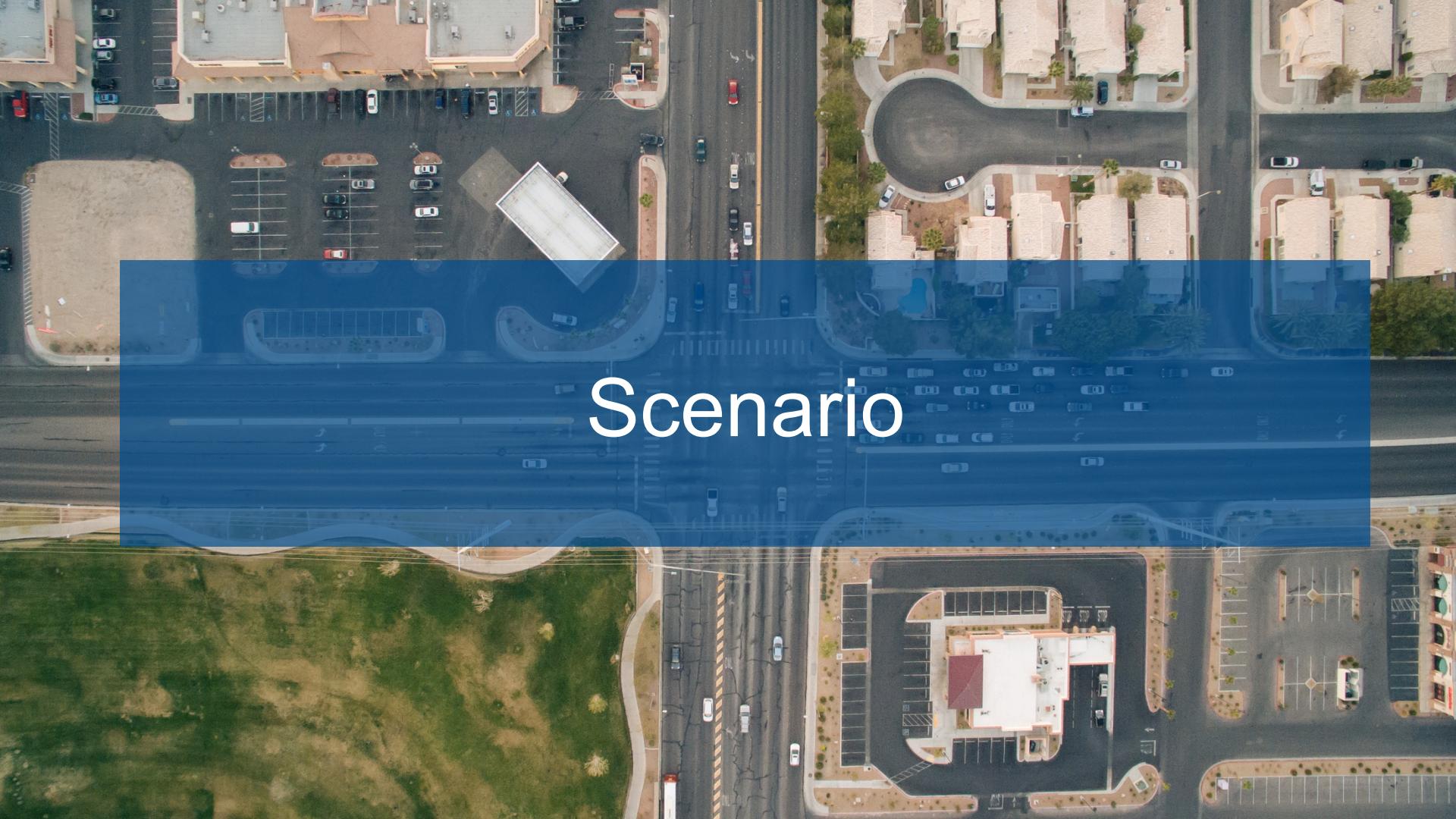
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- › Software-Defined Datacenters
- › Infrastructure as Code
- › Continuous Integration/Delivery
- › High Availability & Scale-Out

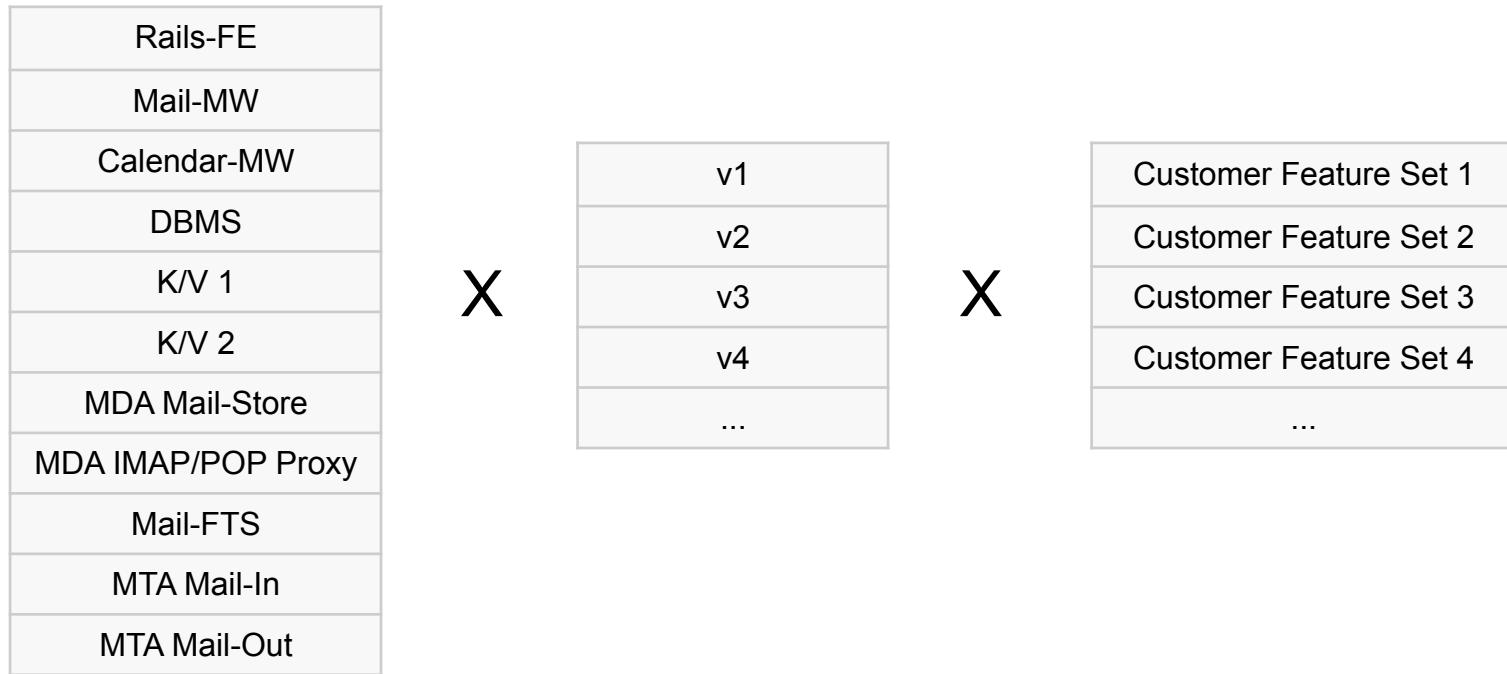
An aerial photograph of a suburban area. On the left, there's a large parking lot with several cars and a building with a brown roof. In the center, a multi-lane road with a median and some trees. To the right, there are several houses with tan roofs arranged in a grid pattern. A blue rectangular overlay covers the middle portion of the image, containing the word "Scenario".

Scenario

The Product

- › Groupware system
- › Several components/languages/teams/feature sets
- › Advanced architecture

Test Matrix



A close-up photograph of a classical statue, likely made of marble, showing the head and upper torso of a man. He has a serene expression, with his eyes closed or looking down. His hair is rendered in a textured, curly style. The statue is set against a solid blue background. A large, semi-transparent dark blue rectangular box is overlaid on the lower half of the image, covering the torso area.

Stories from Real World

We can't run integration tests in parallel.





Running all of our tests takes ages.



Our integration tests are fragile.

Producing a bugfix release is hard work.





Time For A Plan

The Plan

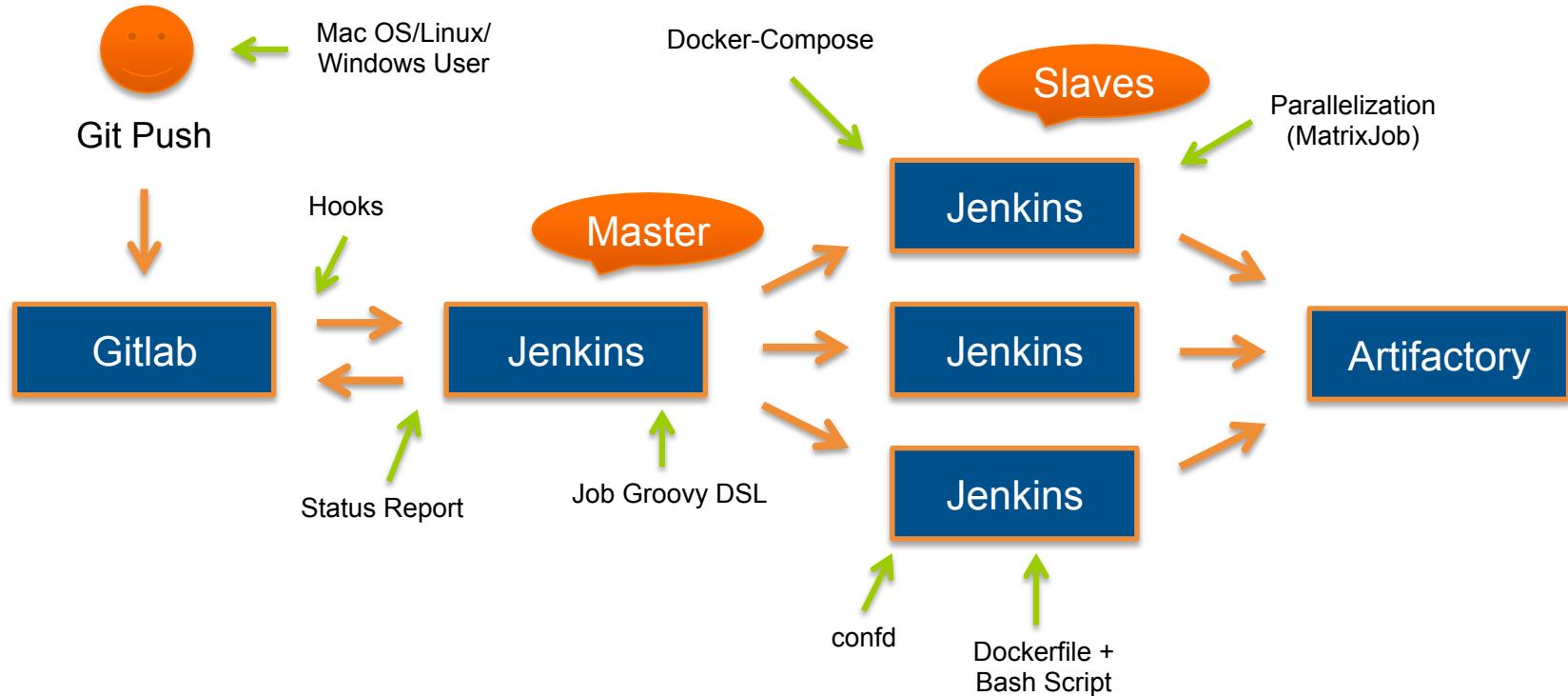
- › Git-Pushes go to feature/bugfix branches
- › Every Git-Push triggers a test
- › Tests run in prod-like environments
- › Tests run in isolated/dedicated environments
- › Automate (almost) everything
- › Increase & maintain (infra) test coverage

The Plan: Building A Private Travis CI Clone



Travis CI

CI Pipeline



Toolset

Tool	Purpose
Gitlab	Git Repository Server
Docker	Container <i>Technology</i>
Bash + Confd	Image/Container Configuration
Docker-Compose	Container/Service Management
Artifactory	Artifact Repository
Jenkins	CI Pipeline

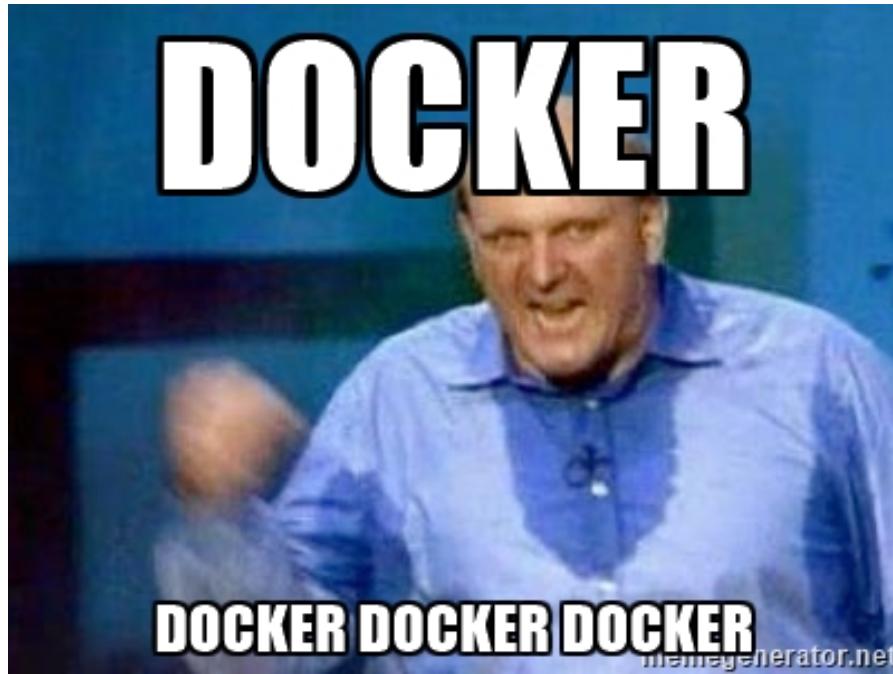
The background of the slide is a collage of three photographs. The top image shows a person's arm and shoulder, with a smartphone held up. The middle image is a close-up of hands writing in a spiral-bound notebook with a pen. The bottom image shows a laptop keyboard and a notebook on a desk. A large blue rectangular overlay covers the center of the collage, containing the title.

Conclusions

Conclusions

- › Don't underestimate the effort for CI/CD preparation
- › Isolated integration testing at ludicrous speed
- › Infrastructure as Code improves documentation
- › Similarity to production leads to faster bugfixing
- › Parallel testing increases work efficiency

A voice in my head..









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Q&A

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