



I DEPLOY ON
FRIDAYS
(AND MAYBE YOU SHOULD TOO) •

MICHAEL ROOK
@MICHAELTCS

DEPLOYING



#StandWithUkraine

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ON A FRIDAY



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DEPLOYING?



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ON A
FRIDAY??



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FRIDAY
DEPLOY TO
PROD

I DON'T KNOW WHO YOU ARE



BUT IF YOU DEPLOY ON A FRIDAY, I
WILL FIND YOU AND I WILL KILL YOU

DEPLOY FRIDAY AT 5?



SURE.

DEPLOY ON A FRIDAY THEY SAID



IT'LL BE FINE THEY SAID

SHOULD I DEPLOY
ON A FRIDAY AT 5PM?

NO

WHAT IF I NEED
TO JUST...

OMG...NO



BUT WHY?



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TRADITION



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FEAR



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RISK



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CONTROL



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CONFIDENCE & TRUST



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TIME TO REPAIR / RECOVER



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ON-CALL STRESS



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SO



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DON'T DEPLOY ON A FRIDAY!



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I USED TO SAY THAT TOO



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I LIKE MY WEEKENDS



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AND MY EVENINGS



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WHAT ABOUT BUGS?



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WHAT ABOUT 3 PM?



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WHAT ABOUT THURSDAY?



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FRIDAY IS 20%
OF THE WEEK



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IMPROVE!



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IF IT HURTS
DO IT MORE OFTEN



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FAILURE IS NOT
THE OPPOSITE OF SUCCESS



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SUCCESS CONSISTS
OF GOING FROM
FAILURE TO
FAILURE WITHOUT
LOSS OF
ENTHUSIASM.

Winston Churchill

BIG STEPS



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FAIL BIG



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SMALL STEPS



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FAIL SMALL



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MAKE IT EFFORTLESS



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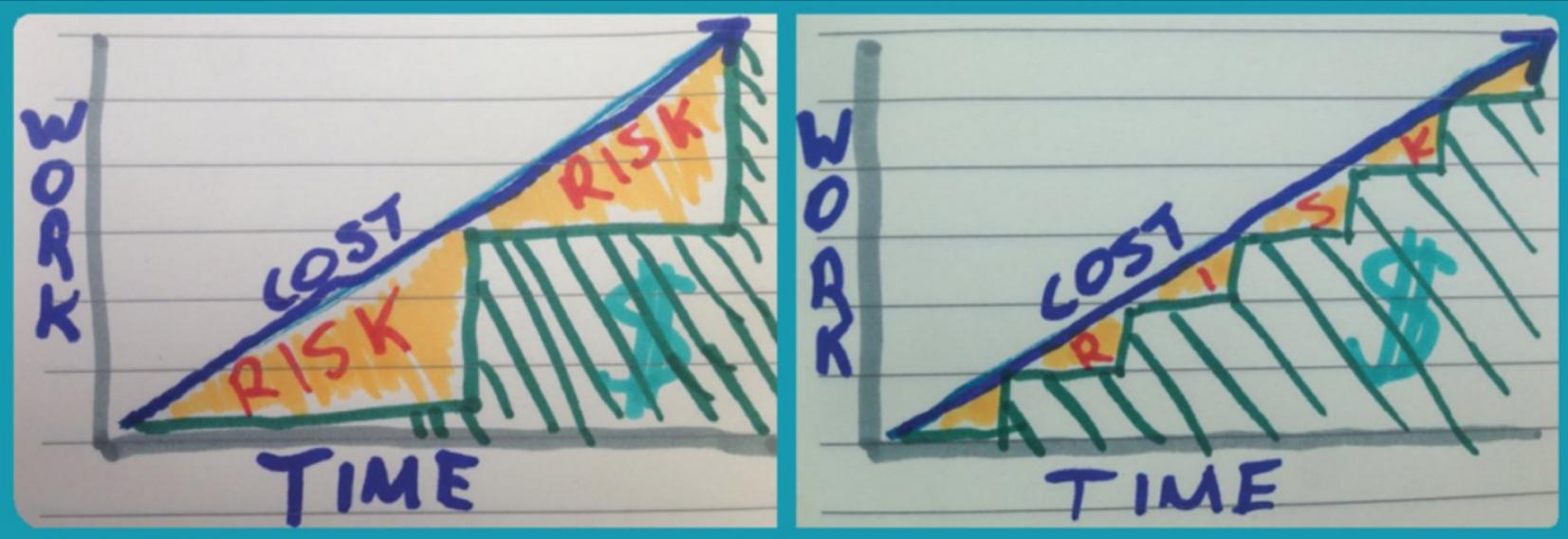
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REDUCE RISK



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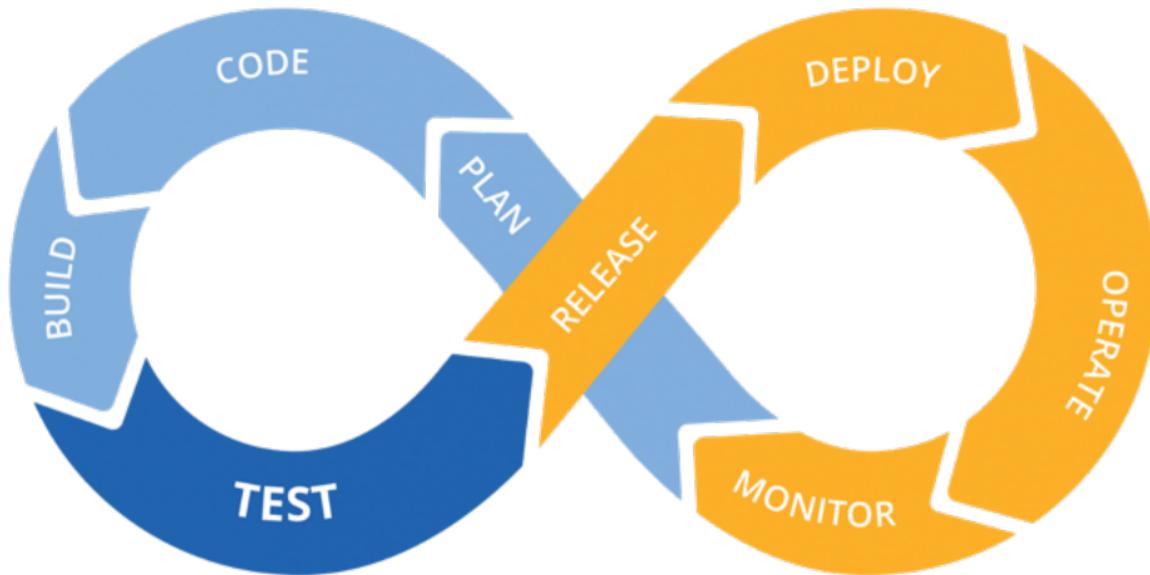
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\$ = REALIZED VALUE

CREDITS TO @FGOULDING

CONTINUOUS EVERYTHING

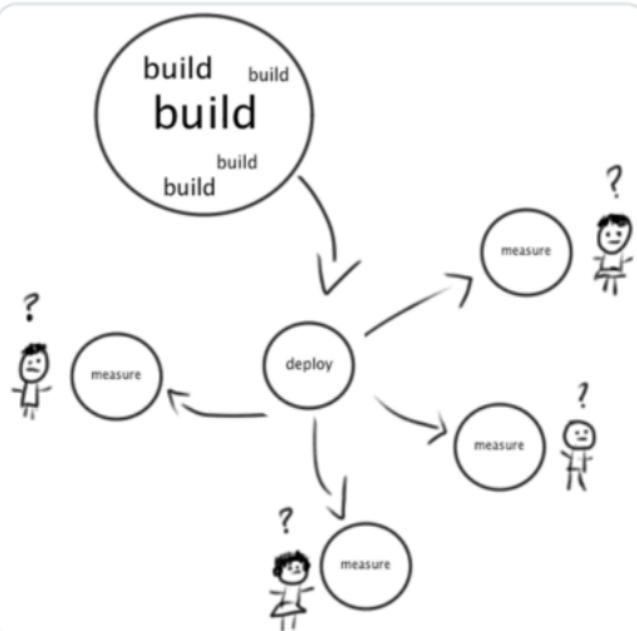




David J Bland
@davidjbland



Working on broken learning loops sketches



6:54 PM · Jul 29, 2012



3

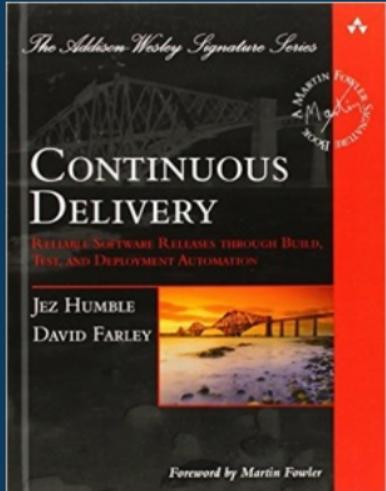


See David J Bland's other Tweets



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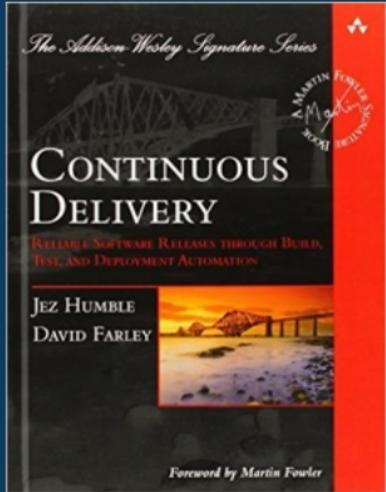


DELIVERING VALUE TO USERS



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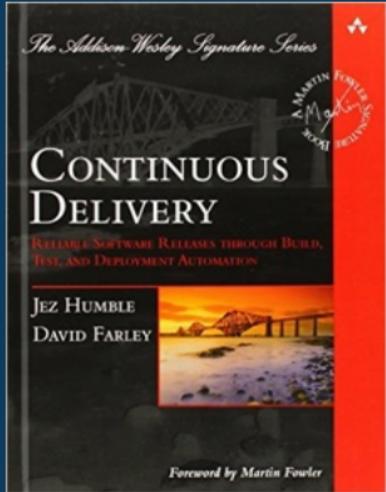


SAFELY & QUICKLY



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IN A SUSTAINABLE WAY



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EASY TO DEPLOY



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EASY TO TEST



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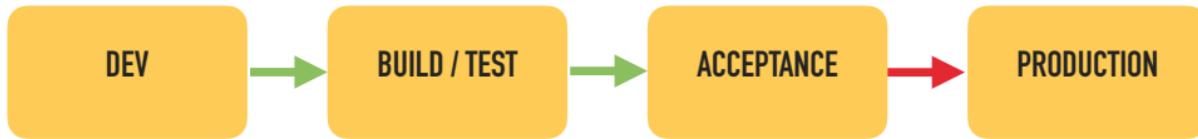
EASY TO INSPECT



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CONTINUOUS DELIVERY



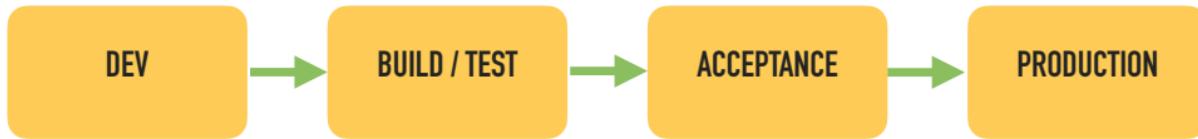
**CODE IS ALWAYS
IN A RELEASABLE STATE**



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CONTINUOUS DEPLOYMENT



IF YOU CAN DEPLOY
ANY TIME



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THEN YOU CAN DEPLOY
ON FRIDAY

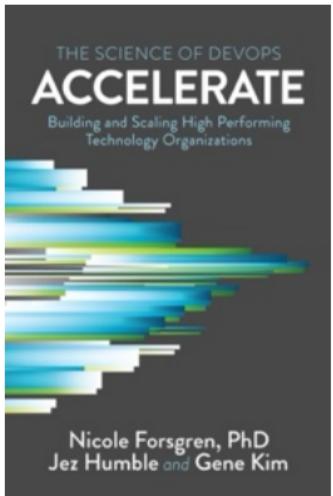


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ELITE PERFORMERS

Comparing the elite group against the low performers, we find that elite performers have...



208
TIMES MORE

frequent code deployments

106
TIMES FASTER

lead time from
commit to deploy



2,604
TIMES FASTER

time to recover from incidents

7
TIMES LOWER

change failure rate
(changes are $\frac{1}{7}$ as likely to fail)



■ Throughput ■ Stability

Source: 2019 State Of DevOps report

BUT OUR CODE IS OLD



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BUT OUR CODE IS NOT UNDER TEST



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BUT OUR CODE IS
IMPOSSIBLE TO CHANGE



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DEALING WITH "LEGACY"



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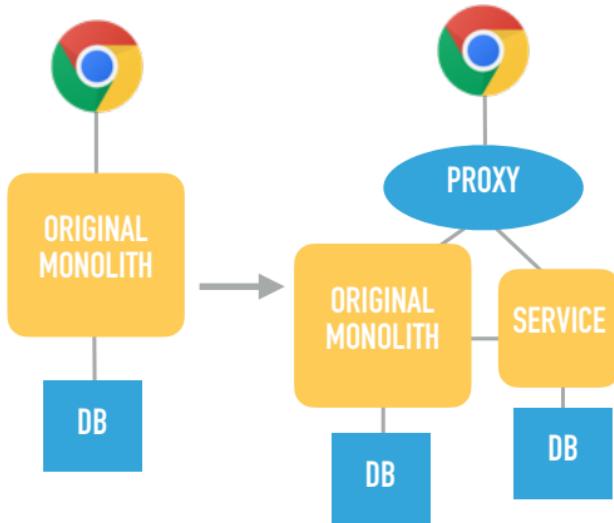
A close-up photograph of a large tree trunk, likely a strangler fig, showing a complex network of aerial roots growing down the trunk. The trunk has a textured, mottled brown and green color. In the background, more trees and foliage are visible in a dense forest setting.

STRANGLER PATTERN



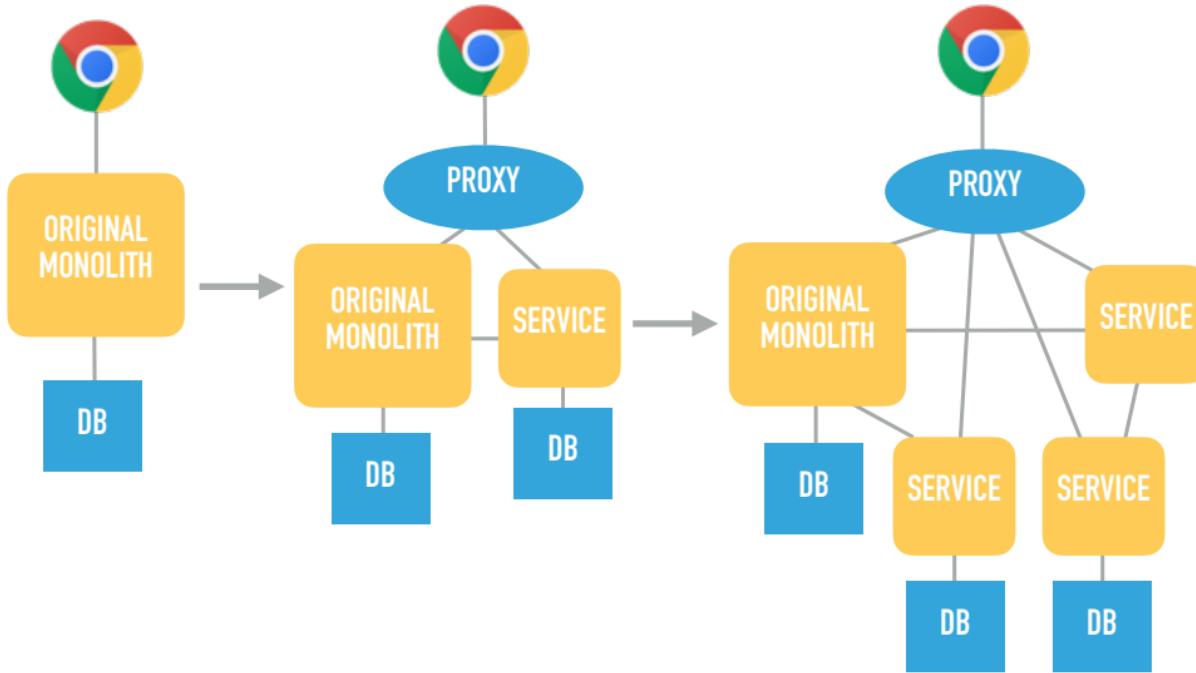
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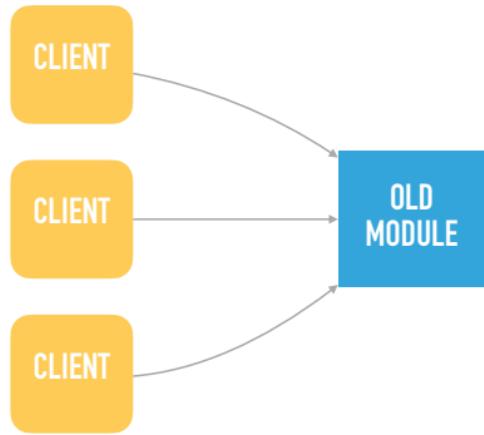


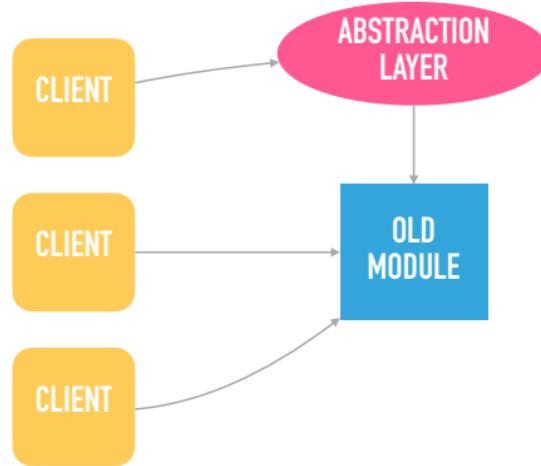
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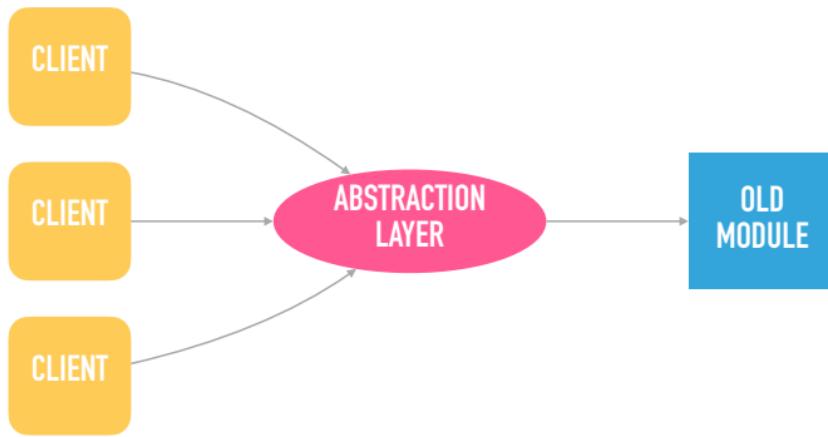
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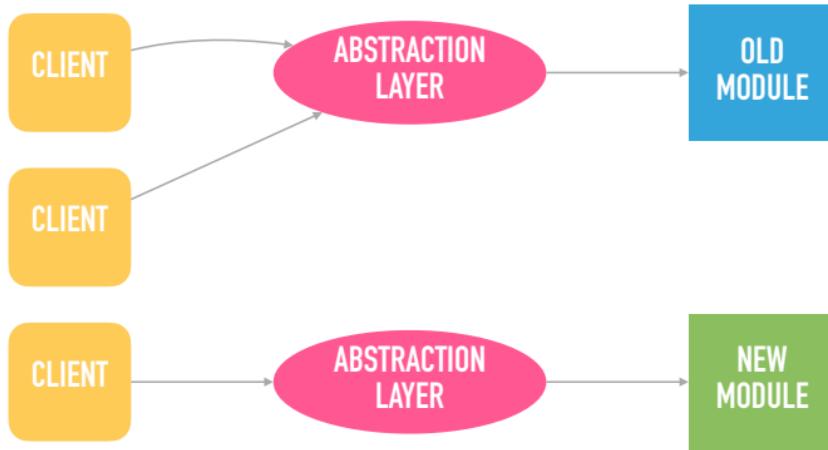
The background of the image is a dark, abstract architectural space. It features several curved, white, cylindrical structures that resemble pipes or ductwork. These curves intersect and overlap, creating a complex geometric pattern. In the upper right corner, there is a vertical element with a horizontal grid or vent pattern. The overall aesthetic is minimalist and modern.

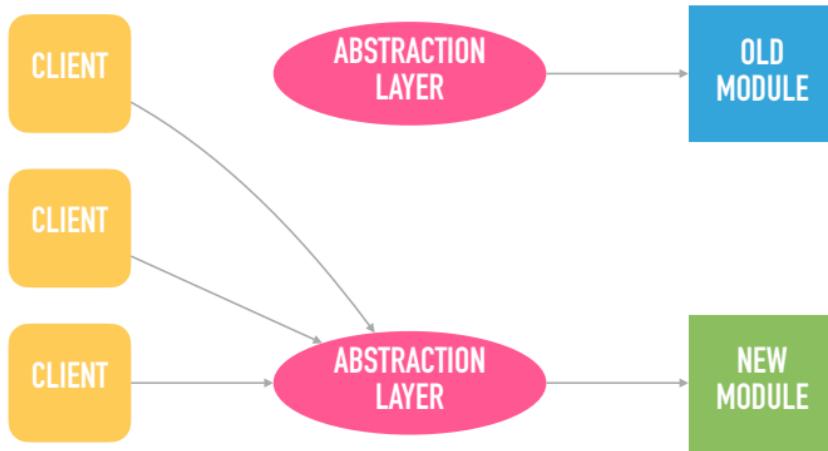
BRANCH BY ABSTRACTION

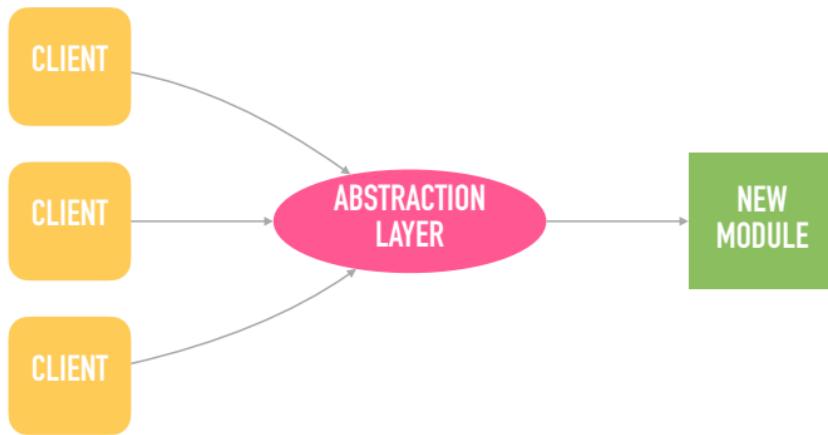


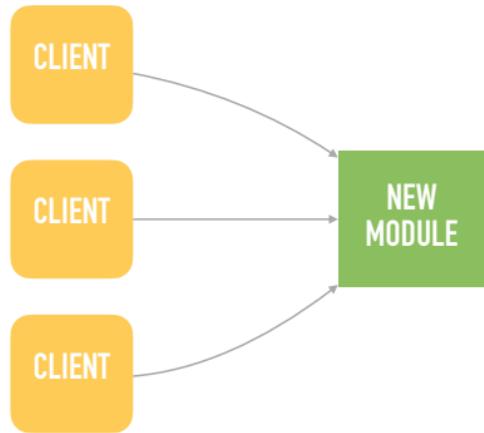












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A black and white photograph showing the intricate silhouettes of bare tree branches against a light, overcast sky. The branches are dark and twist in various directions, creating a complex web-like pattern across the frame.

ON BRANCHES

CONFLICTS

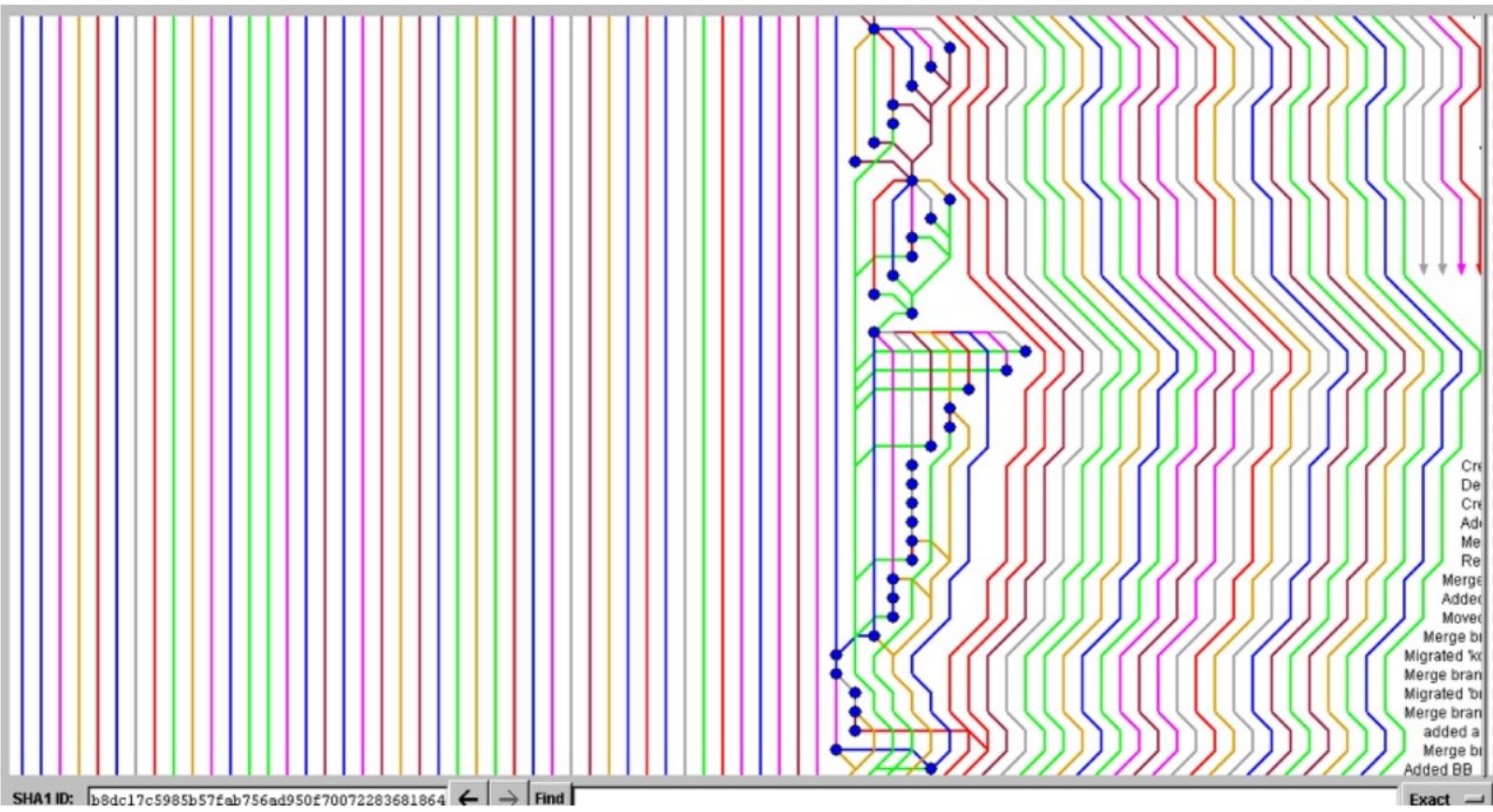


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**"This pull request affects 31 files...
could be a lot of conflicts if we don't merge it soon"**





Cr
De
Cr
Ad
Me
Re
Merge
Added
Moved
Merge br
Migrated 'ki
Merge bran
Migrated 'bi
Merge bran
added a
Merge br
Added BB

CONTINUOUS INTEGRATION



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**INTEGRATE TO MASTER
AT LEAST DAILY**



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DELAYING INTEGRATION



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TRUNK BASED DEVELOPMENT

ONLY COMMIT TO MASTER



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A photograph of a railway track that branches into two paths, symbolizing merging features. The tracks are made of dark steel rails and light-colored gravel. In the background, there's a small white building with a red-tiled roof, surrounded by lush green trees and bushes. A yellow speed limit sign is visible on the left side of the tracks.

MERGING FEATURES?

DECOPUPLE DEPLOYMENTS FROM RELEASES



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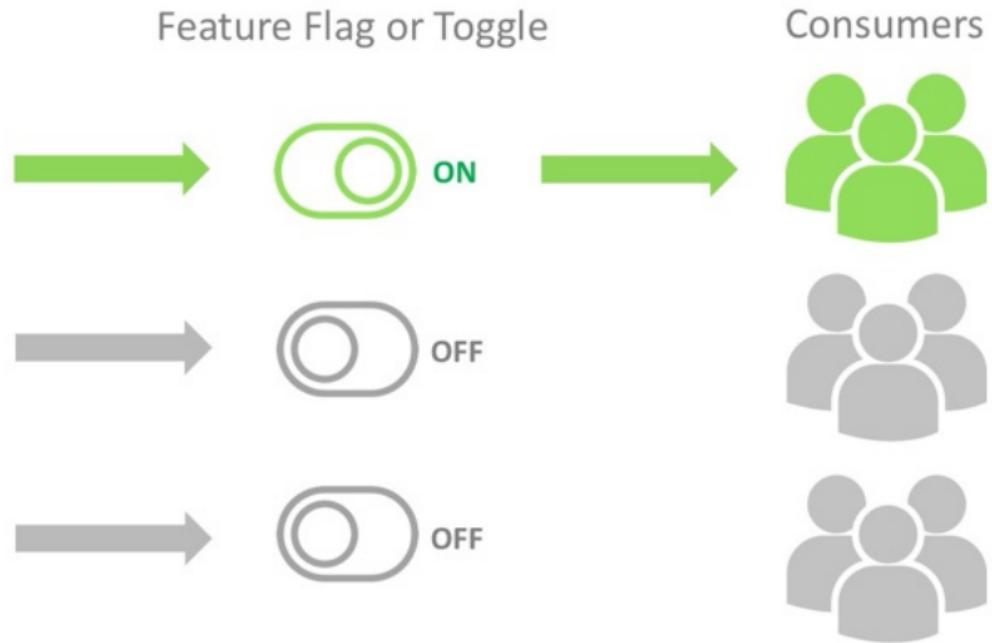
FEATURE TOGGLES



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New Feature



```
if (FeatureManager.isActive("my-feature")) {  
    runSomeCodeForThisFeature();  
} else {  
    runSomeOtherCodeNotForThisFeature();  
}
```



PULL REQUESTS?



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CODE REVIEWS ARE USEFUL



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BUT: FLOW DELAY



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A black and white photograph of two men sitting on a couch, working together on a laptop. The man on the left, wearing a dark hoodie, has his head close to the other man's shoulder, suggesting a collaborative or focused atmosphere. The man on the right, wearing glasses and a light-colored shirt, is looking down at the laptop screen, which is visible on the right side of the frame. Both are leaning forward, indicating concentration. The background is a plain wall.

PAIR PROGRAMMING

CONTINUOUS INLINE CODE REVIEW



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MOB PROGRAMMING



A perspective view of several large, light-colored industrial pipelines running along a road at sunset. The pipelines are supported by blue metal brackets. In the background, a blurred industrial facility with tall, illuminated structures is visible against a warm, orange and yellow sky.

PIPELINES

AUTOMATION



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AUTOMATION

AUTOMATION



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AUTOMATION
AUTOMATION
AUTOMATION



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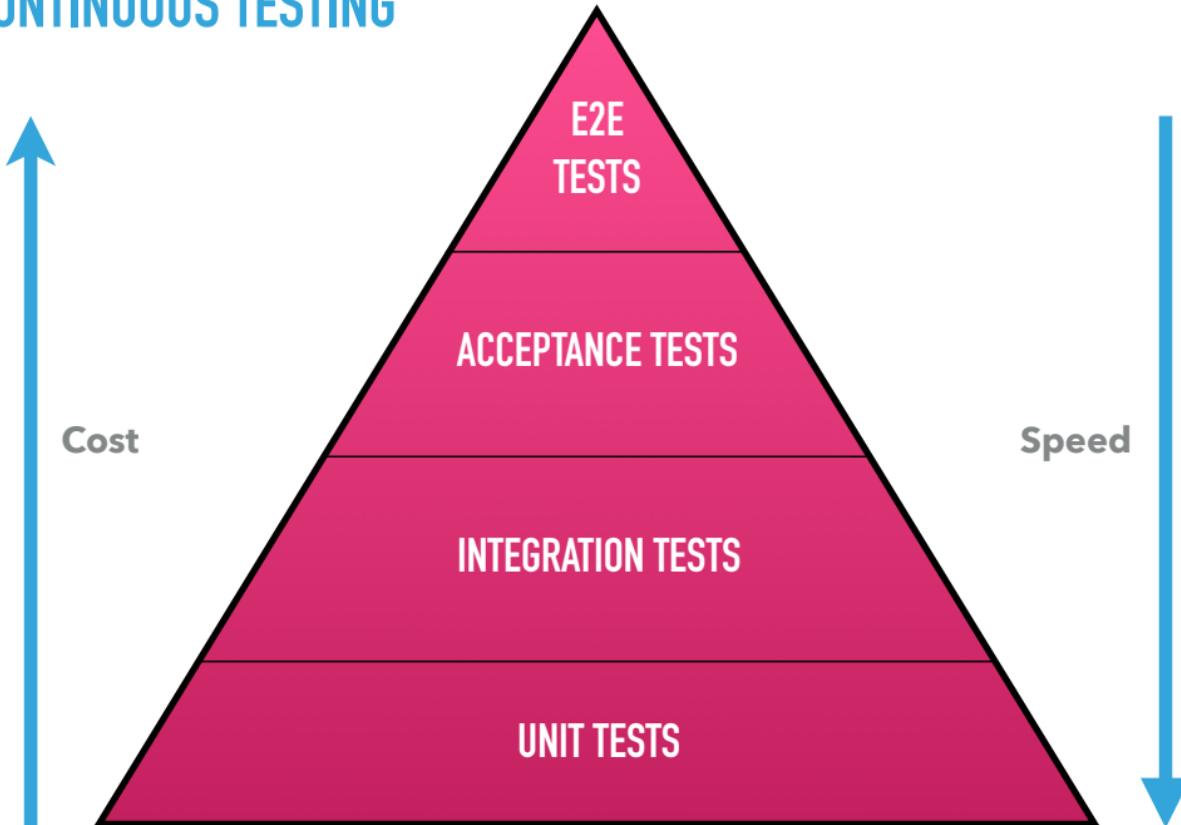
CONTINUOUS TESTING



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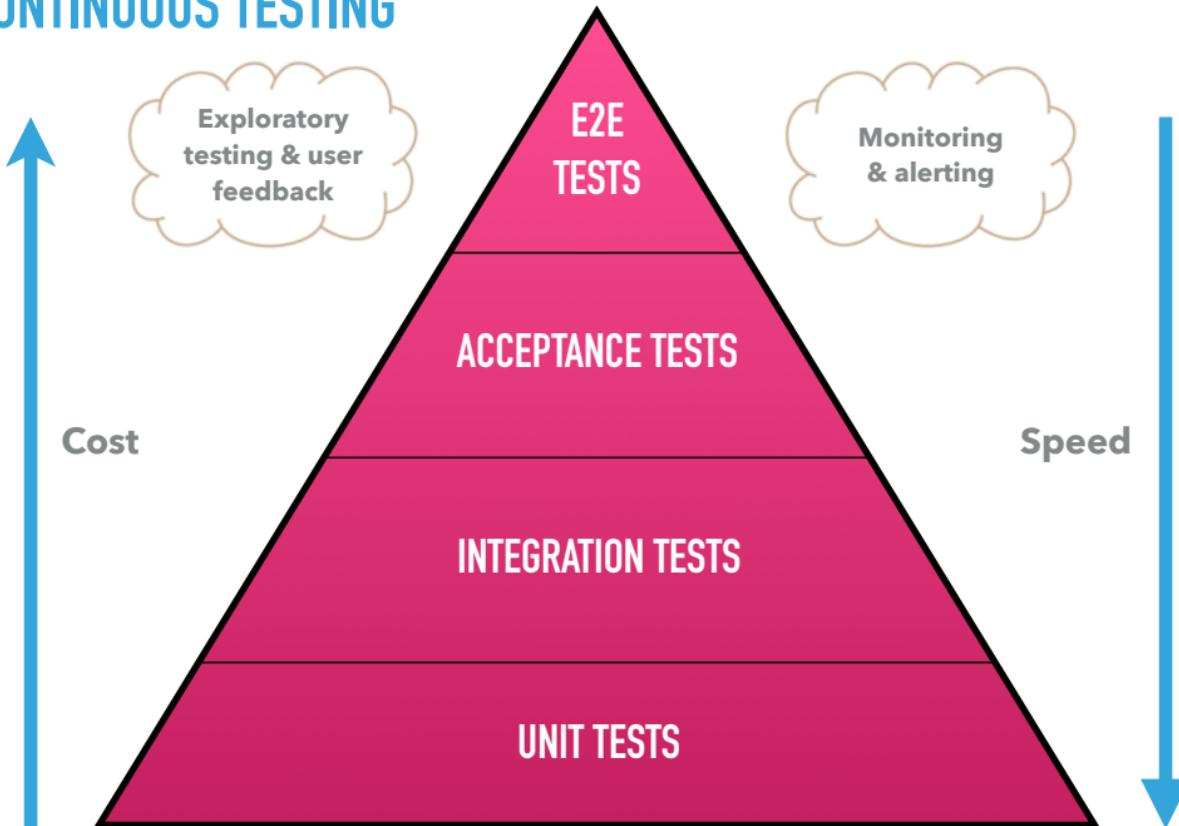
CONTINUOUS TESTING



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CONTINUOUS TESTING



"Testing shows the presence, not absence, of bugs."

EDSGER W. DIJKSTRA



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NO TEST SUITE
DETECTS EVERY ISSUE



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PIPELINE SPEED = KEY

DEPLOYMENTS



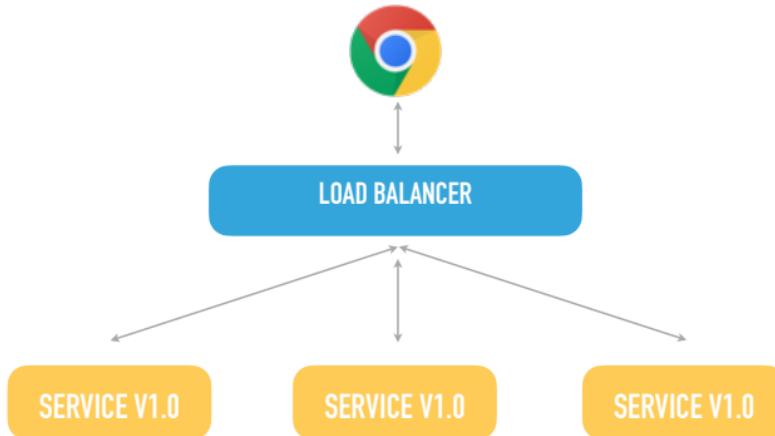
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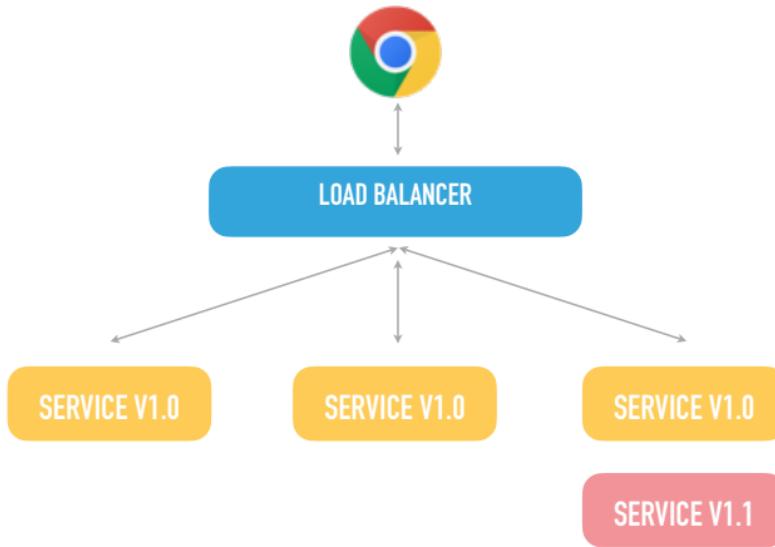
A wide-angle photograph capturing the annual cheese rolling event in Gloucestershire, England. A dense crowd of spectators lines the top of a steep, lush green hillside. In the foreground and middle ground, numerous participants are seen sliding down the slope on their backs, chasing after a wheel of cheese. The scene is filled with motion and energy, set against a backdrop of dense green trees and bushes.

ROLLING UPDATE

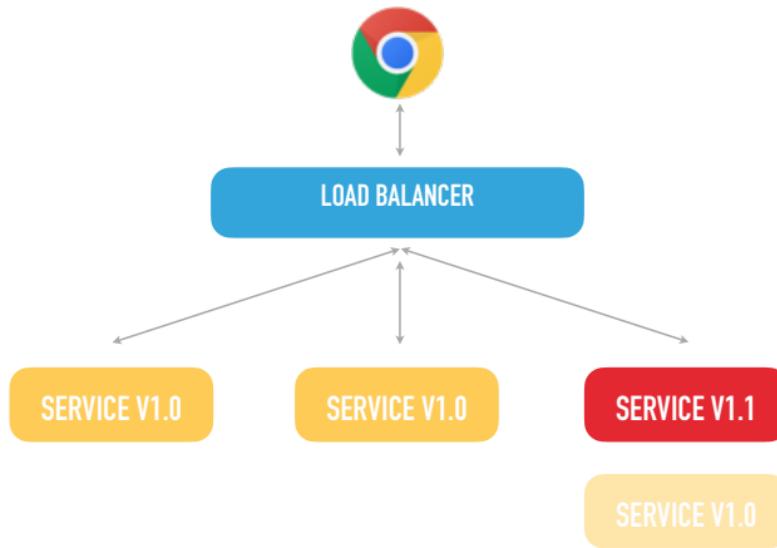
ROLLING UPDATE



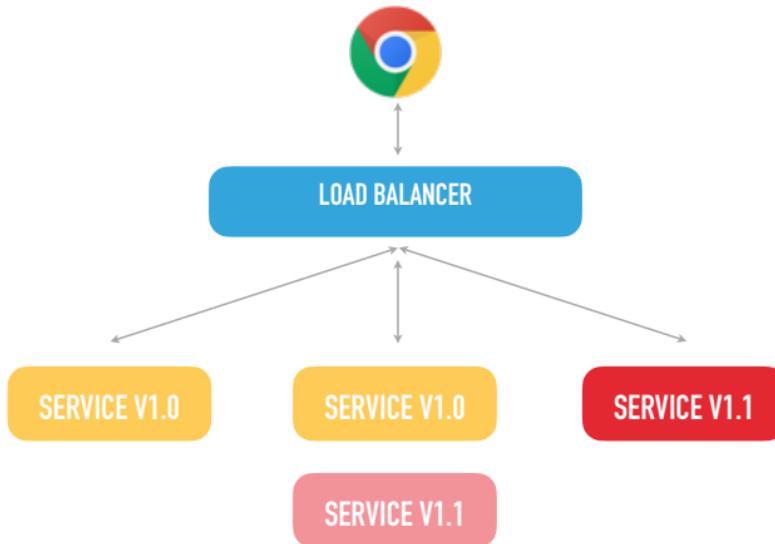
ROLLING UPDATE



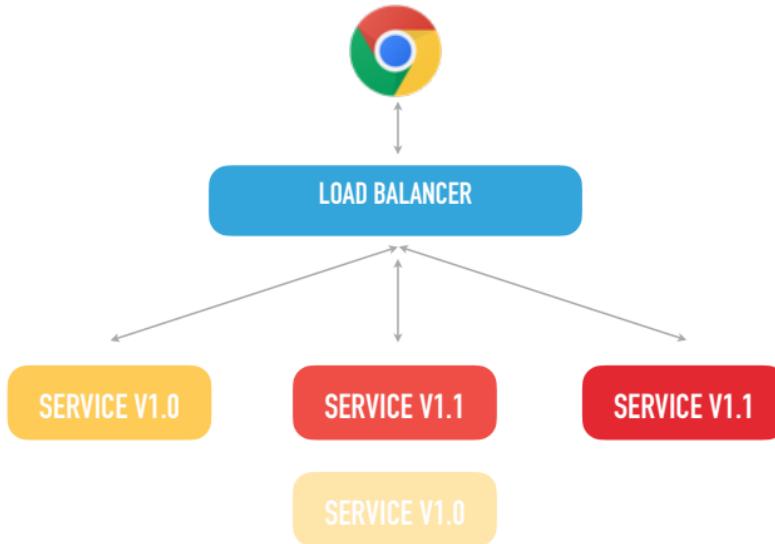
ROLLING UPDATE



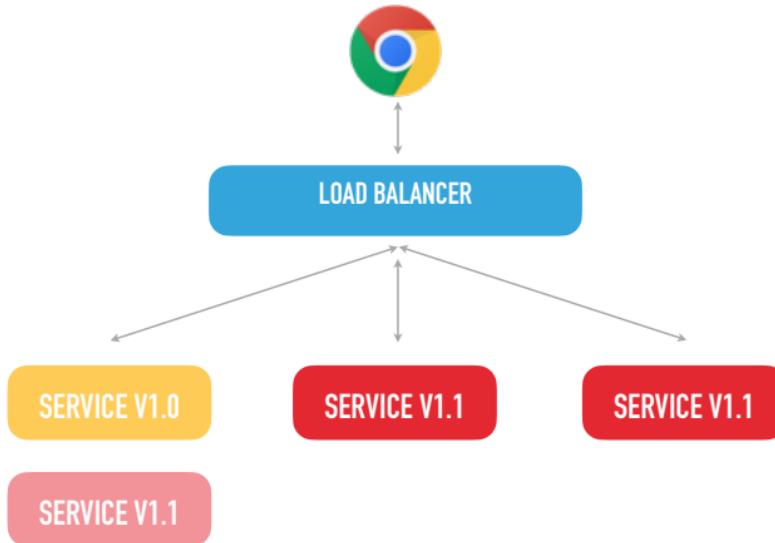
ROLLING UPDATE



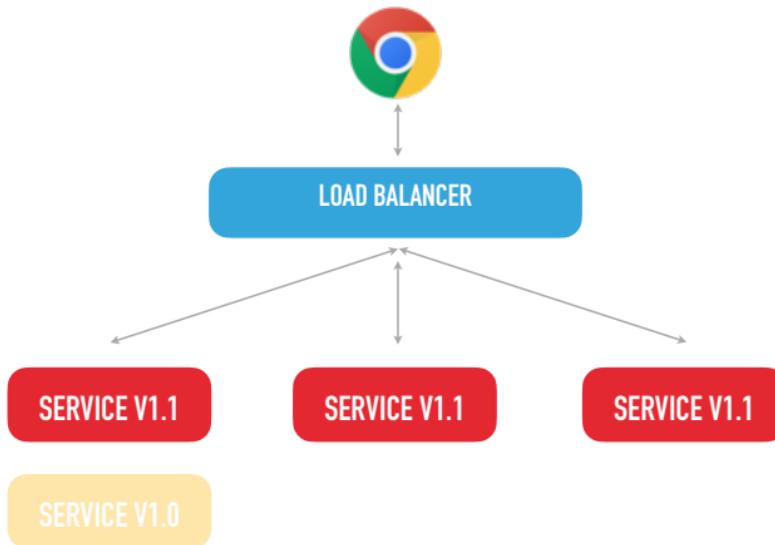
ROLLING UPDATE



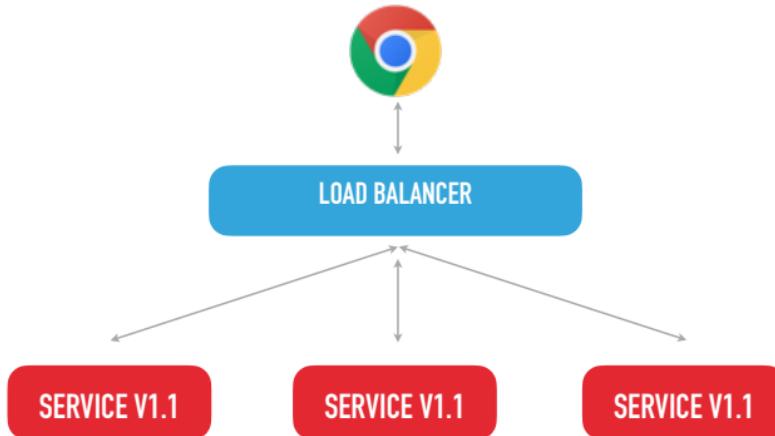
ROLLING UPDATE



ROLLING UPDATE



ROLLING UPDATE



```
pipeline {  
    stages {  
        stage('Run tests') {  
            sh "gradle check"  
        }  
        stage('Build docker image') {  
            sh "docker build -t jobservice:${env.BUILD_NUMBER}"  
            sh "docker build -t jobservice:${env.BUILD_NUMBER}"  
        }  
        stage('Deploy staging') {  
            sh "ansible-playbook -e BUILD_NUMBER -i staging deploy.yml"  
        }  
        stage('Deploy production') {  
            sh "ansible-playbook -e BUILD_NUMBER -i prod deploy.yml"  
        }  
    }  
}
```

image: registry.local/runner:latest

stages:

- test
- images
- deploy

phpunit NUMBER ."

stage: \${env.BUILD_NUMBER} test

script: - bin/phpunit

images: \${env.BUILD_NUMBER}

stage: images

script: - make images

only: - master

publish: \${env.BUILD_NUMBER}

stage: deploy

script: - make deploy

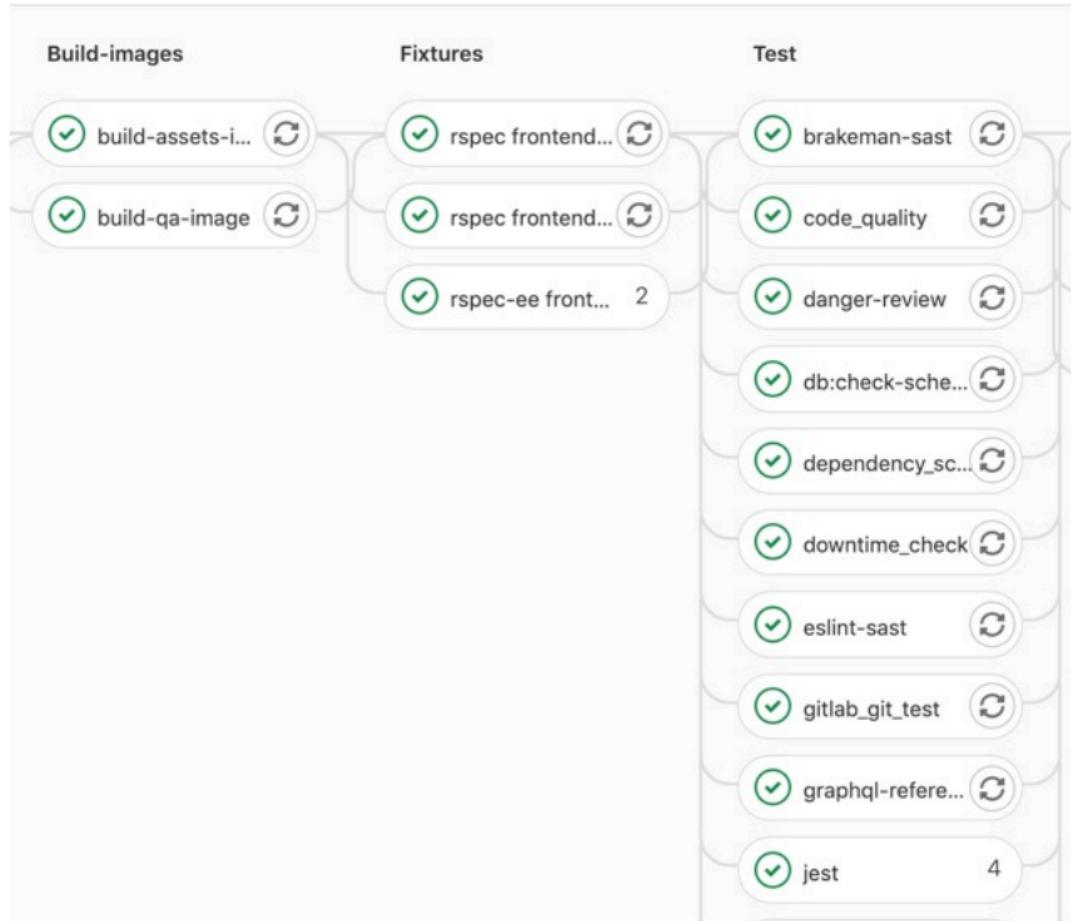
only: - master

PIPELINE AS CODE



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FEEDBACK!

DEPLOYING



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ON A FRIDAY



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YOU CAN DO IT TOO!

THANK YOU FOR LISTENING!

@michieltcs / michiel@michielrook.nl /

@michielrook@mastodon.nl

www.michielrook.nl



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