

Performance (and load) testing in production!

Leandro Melendez
Performance Advocate, Grafana k6

WHOAMI



k6 DevRel

Blog

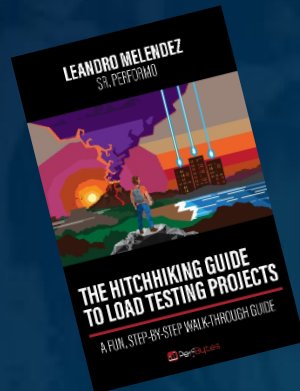


Podcast



YouTube

Book



Menu

Traditional perf Into production Tips

Traditional Performance Practices

Once upon a time

Performance was different

- Physical servers
- Waterfall
- Limited/fixed resources
- Monoliths
- Tests in pre-prod



Production was...

Larger than
any
environment



Tough to
release

Fragile

Other times

Performance meant load

- Burn-it-all load
- Had to test elsewhere
- People afraid of perf
 - Justifiably



Why afraid?

Performance meant load

- Load pushed limits
- System may stop working
- Not working production=**BAD**



Why afraid? I mean...

SERIOUSLY BAD!!!



Can't easily see...

Waterfall and thick solutions

- Hard to see performance
- In advance
- Without automations



Production roadblocks



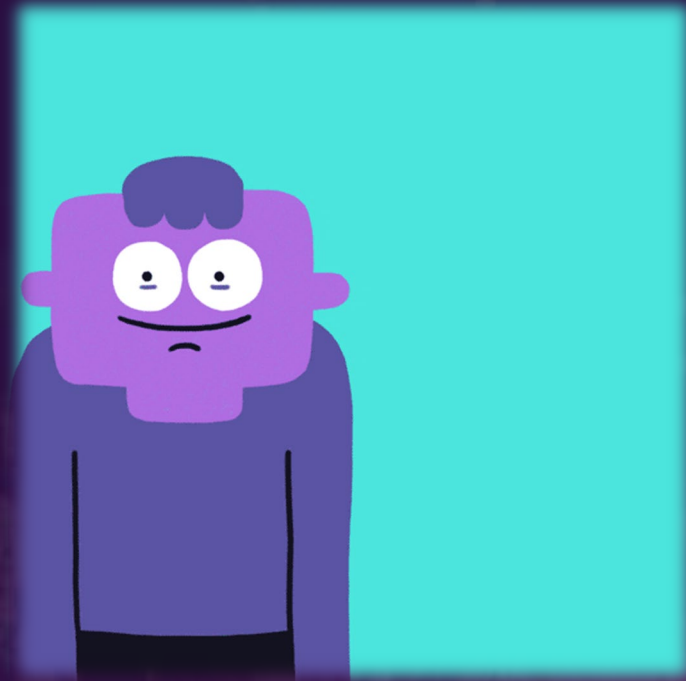
Don't
Touch
Prod

Production roadblocks

Required
To be
Frozen



Production roadblocks



Test
Similar
To Prod

Production roadblocks

Run at night
At weird hours

2 DAYS INTO WORKING THE NIGHT SHIFT



He's becoming isolated and weird...

Production roadblocks

And much much more...



2

Enter Production

2023 CONFERENCE | FEBRUARY 21-23, 2023 | VIRTUAL :: ORLANDO | [CMGIMPACT.COM](https://cmgimpact.com)

Why not?

Reasons not to test in prod:

- Load will bring down
- Automations needed
- Not enough Data for load
- Limited HW
- It is already in Prod



Much has changed!



Wait! We are in the future!

- No thick solutions
- Services, micro-services and the elastic cloud!
- Frequent releases, enter continuous
- BALTs invalid every sprint
- BALTs not needed that much as prod is already there

Modern Production

Production has changed

- Elasticity
- Continuous
- Interconnected
 - Services & micros
- Distributed
- Can be rolled back
 - Should be
- **Release techniques**



Modern Performance

Performance is not only load

- RUM
 - Synthetics and unit
 - Variations over releases
- Observability
 - Process
 - Users
 - Code



Keep in mind

You can also load test

- Chihuahua load tests
- Users load testing
- No BALTs in prod
- ... Well rarely...

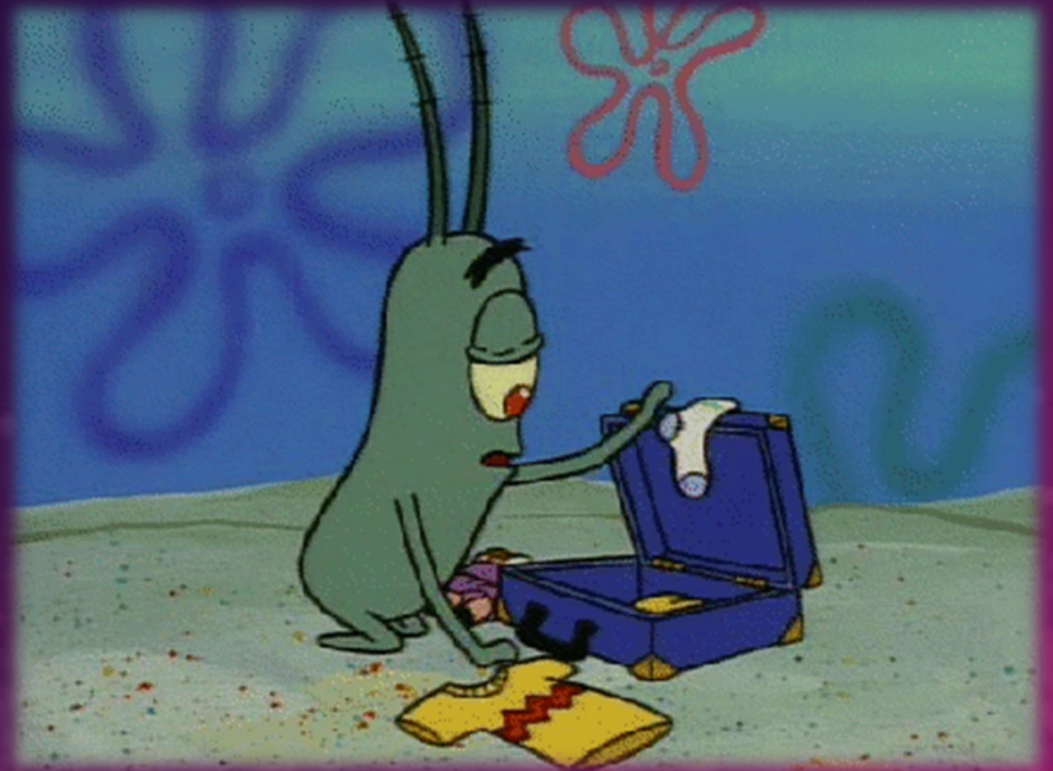


Tips to perf test Production

What you'll need

Before you test in prod:

- Easy rollbacks
- Release techniques
- Great observability
- Automations and synthetics
- Historical metrics



Metrics & automations



You can (must) use automations

- Short, small, not loady
- From QA or for Prod
- Iterate important ones
- Keep metrics
- Mix with RUM

Observe!

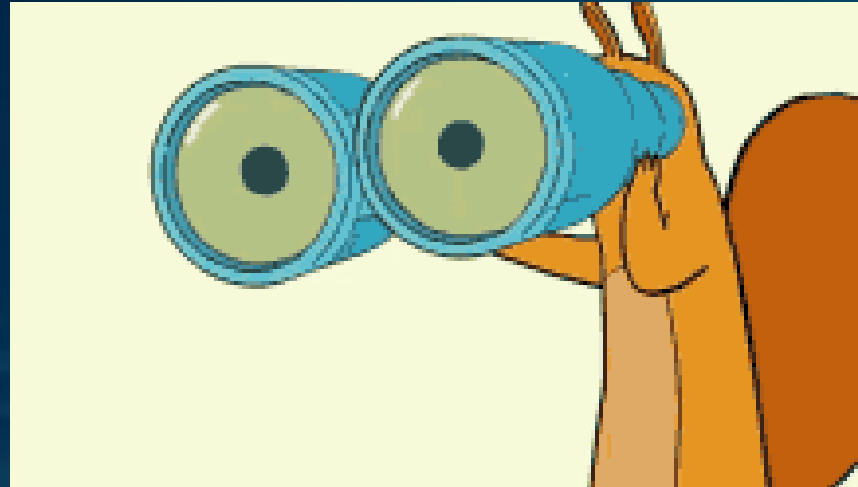
Again, great observability!

APM

Monitor

Instrument

Telemetry



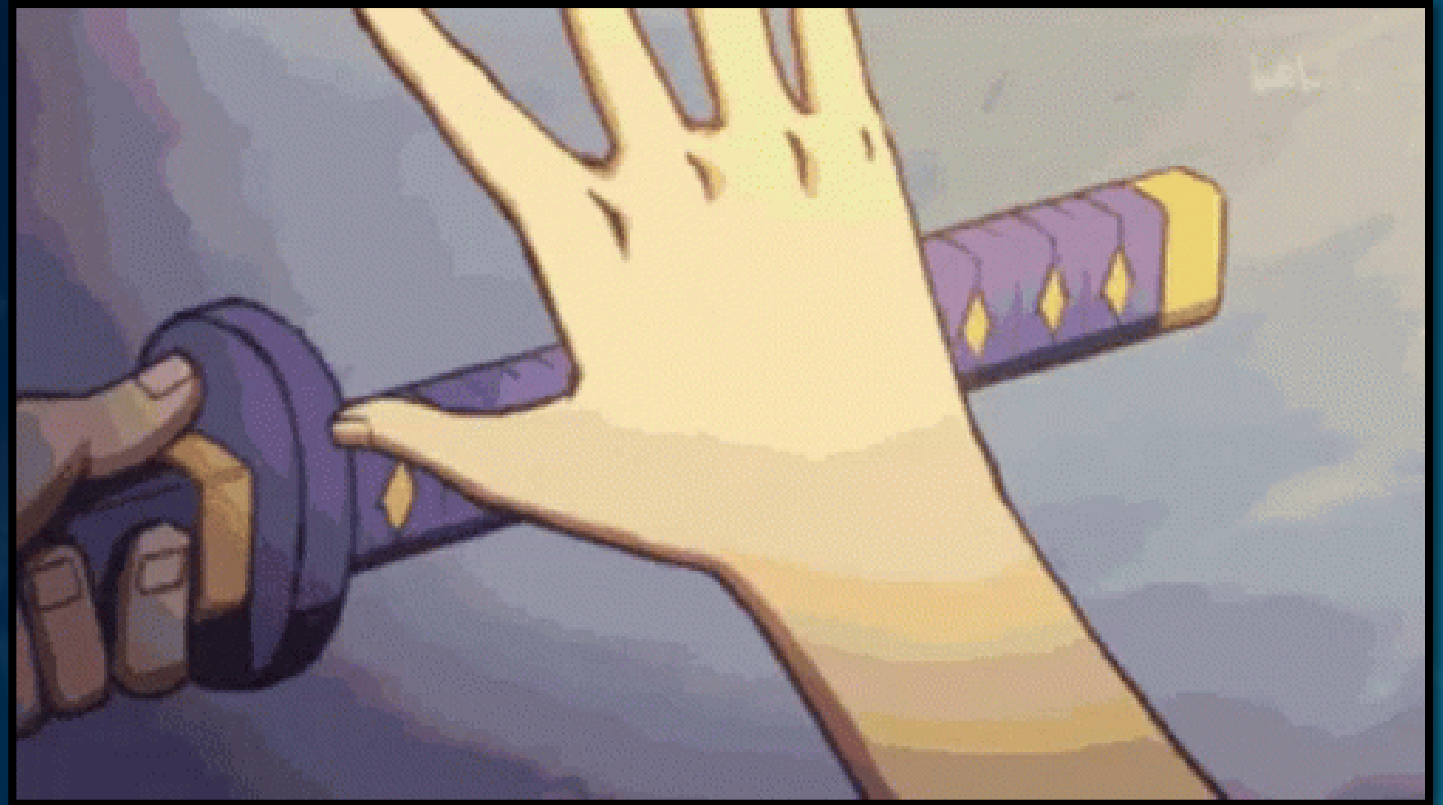
Just release!!



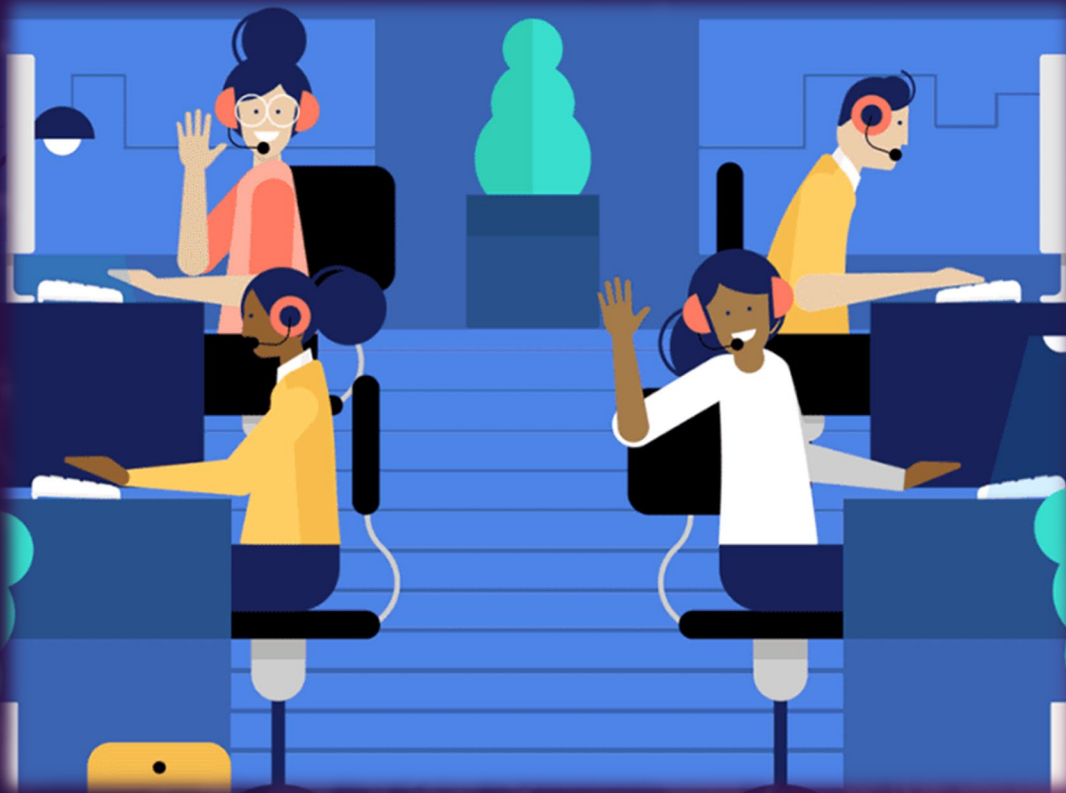
- Be careful
- Test right away
- Monitor
- Fix right away
- Rollback if needed

Release techniques

A/B
Canary
Blue/Green
Regions
Gradual growth



Let them (load) test



- Production already gets load
- Let them load test
- Beta? Sub groups?
- Divide&Conquer

BALTs!

Only when needed

Be careful with prod

Create sub prods

Sometimes must do in prod



Last thoughts...

- Perf tests are about speed and efficiency
- Don't obsess on BALTs
- Prepare prod and releases to be:
 - Robust, testable, and reparable
- **OBSERVE!**



