Performance (and load) testing in production!

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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

Fragile

Tough to release
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

don't touch me
Production roadblocks

Required
To be
Frozen

LET IT GO, LET IT GO
Production roadblocks

Test
Similar
To Prod
Production roadblocks

Run at night
At weird hours
Production roadblocks
And much much more…

BUT....WAIT! THERES MORE
Enter Production
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
- 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!
THANKS

“For watching!”