Remote development can improve your developers’ remote work experience

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Agenda

- Remote development vs. remote work
- How remote development can help address the challenges of remote work:
  - Developer onboarding
  - Developer velocity
  - Secure access to shared tools

Remote work

- **Office:** One, many, none
- **Who is remote:** No one, some folks, some teams, everyone
- **Working hours:** Timezone specific, core hours, no restrictions
- **Communication:** Sync, async

Challenges with remote work

- Onboarding new users
- Mentoring
- Providing feedback
- Working collaboratively
- Loneliness, connection

Remote development

- Sandboxed environment with a code editor, a shell, and a file system
- Can be running in the cloud, on another machine you own, or on-prem
- Can be accessed from a browser only

Tuning a remote dev environment

Consistent starting point

- Dev image: Container image with specific OS

Customization

- Dotfiles: user-specific configurations
- Themes
- Extensions

Save setup time

- Pre-downloaded dependencies
- Pre-built branches

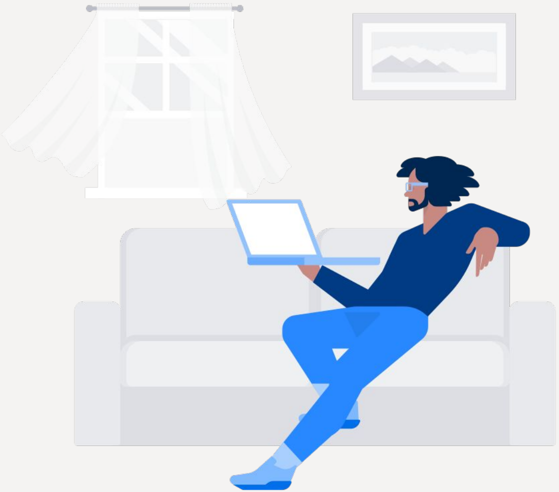
Setting up a remote development environment can help improve your remote work experience, in general

No tool can make up for a lack of process

How we're talking about remote development now is how we were talking about DevOps 5 years ago

How remote development improves your remote work experience

1. Developer onboarding
2. Developer velocity
3. Secure access to shared tools



Developer onboarding

Developer onboarding: technical benefits

Automated, reproducible environments

Easier to get set up than following a checklist

Repeatable & moveable personalization

Set up personal preferences once & forget

Engineering onboarding usually kind of sucks

(Even if the rest of the onboarding experience is pretty good!)

Developer onboarding: people benefits

Pair programming

Can work on something together, on a videocall

Two keyboards is (hopefully) better than one

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Developer velocity

Developer velocity

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Faster change lead time in best performers compared to worst performers

2019 State of DevOps report: https://services.google.com/fh/files/misc/state-of-devops-2019.pdf

Developer velocity is about making changes more quickly, not getting more done

(By making it possible to make changes quickly, you will get more done anyways!)

Developer velocity

vs.

Compliance → Code review

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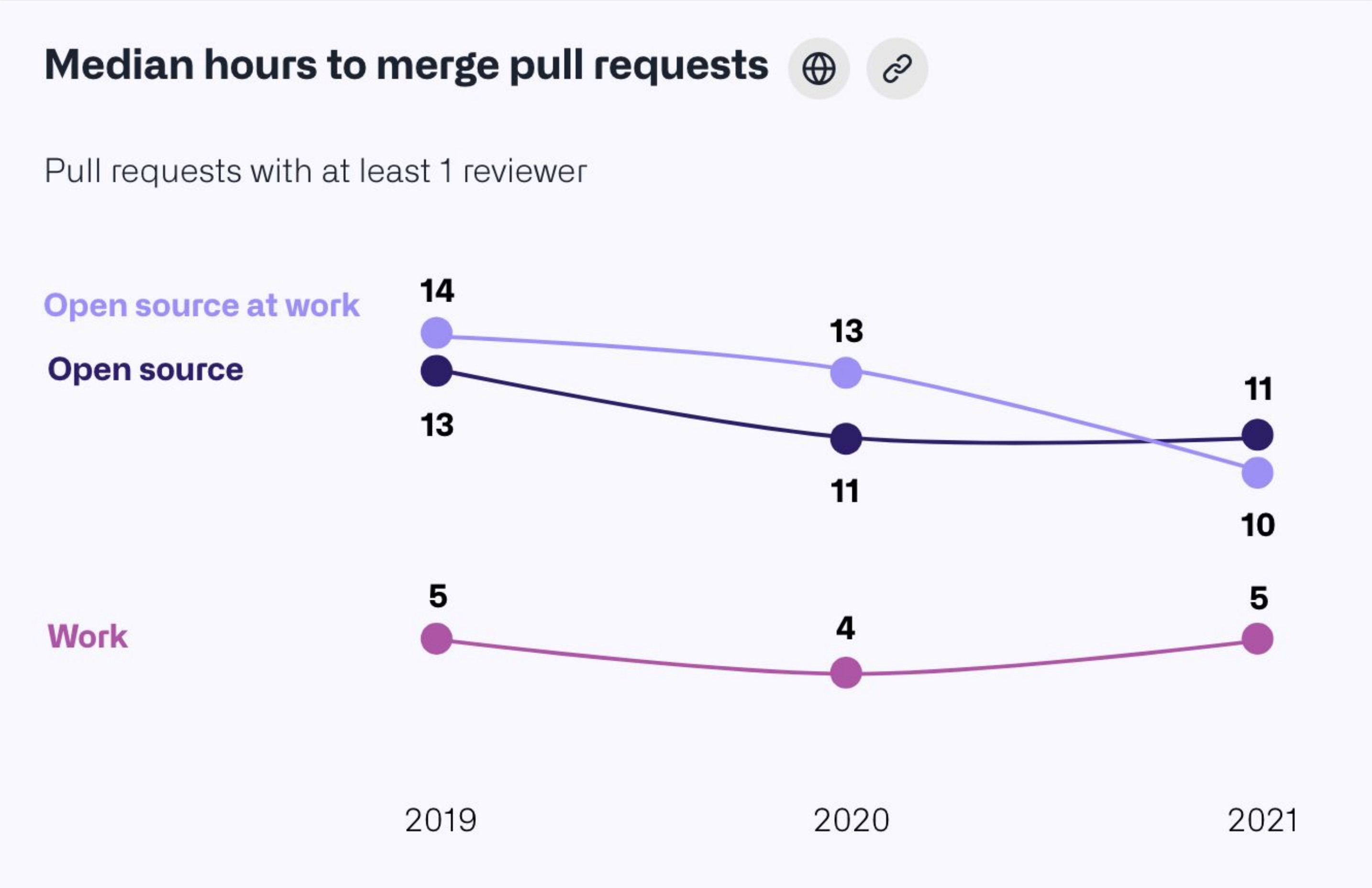

Median hours to merge pull requests

Pull requests with at least 1 reviewer

2021 State of Octoverse: https://octoverse.github.com/writing-code-faster/#merging-pull-requests

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Developer velocity: benefits

Share an environment for code review

No setup for reviewer

No “it works on my machine”

Can still work on multiple issues in parallel

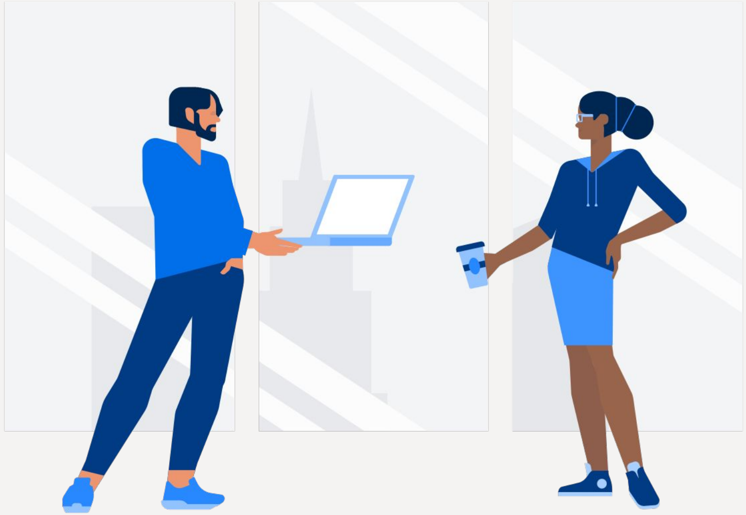
Secure access to shared resources

Remote work kind of sucks when you’re the only one

But others have to care if they’re remote too!

Resources needed for remote development

- Package / artifact registries
- License servers
- Databases
- Monitoring tools
- Build pipelines
- Test environments



Challenges in accessing internal resources

- High latency
- Management overhead and availability concerns
- Security and privacy

Secure access to resources: benefits

Easier to protect

Single point of entry

Bottleneck for logging

Reduced surface of attack

Remote development can help improve remote work

- Onboard developers more easily
- Improve developer velocity
- Make internal services more easily accessible to everyone