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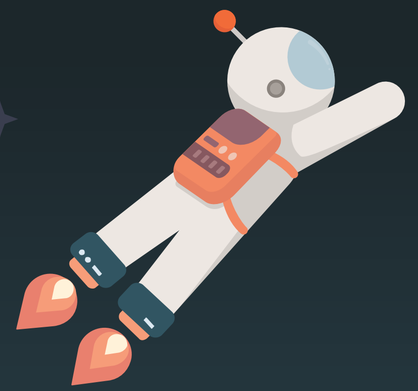
Who owns chaos?



conf42

Joyce Lin

Developer Advocate Lead, Postman

@petuniaGray

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Joyce Lin

Developer Advocate, Postman

Postman is an API Development Environment (ADE) used by more than 8 million people.

For many teams, Postman is an everyday tool that helps people work with APIs more efficiently.

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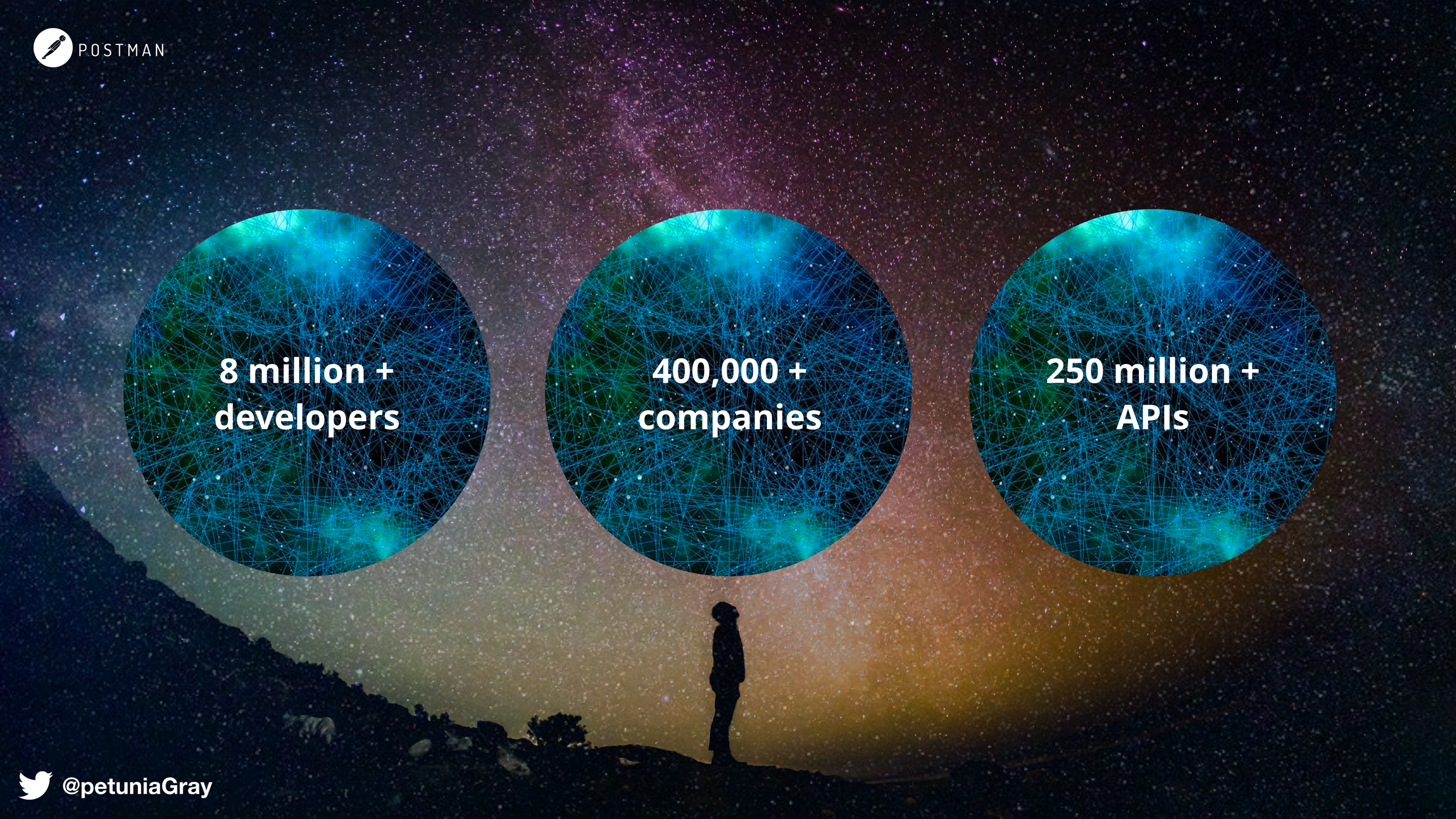
POSTMAN
8 million +
developers
400,000 +
companies
250 million +
APIs
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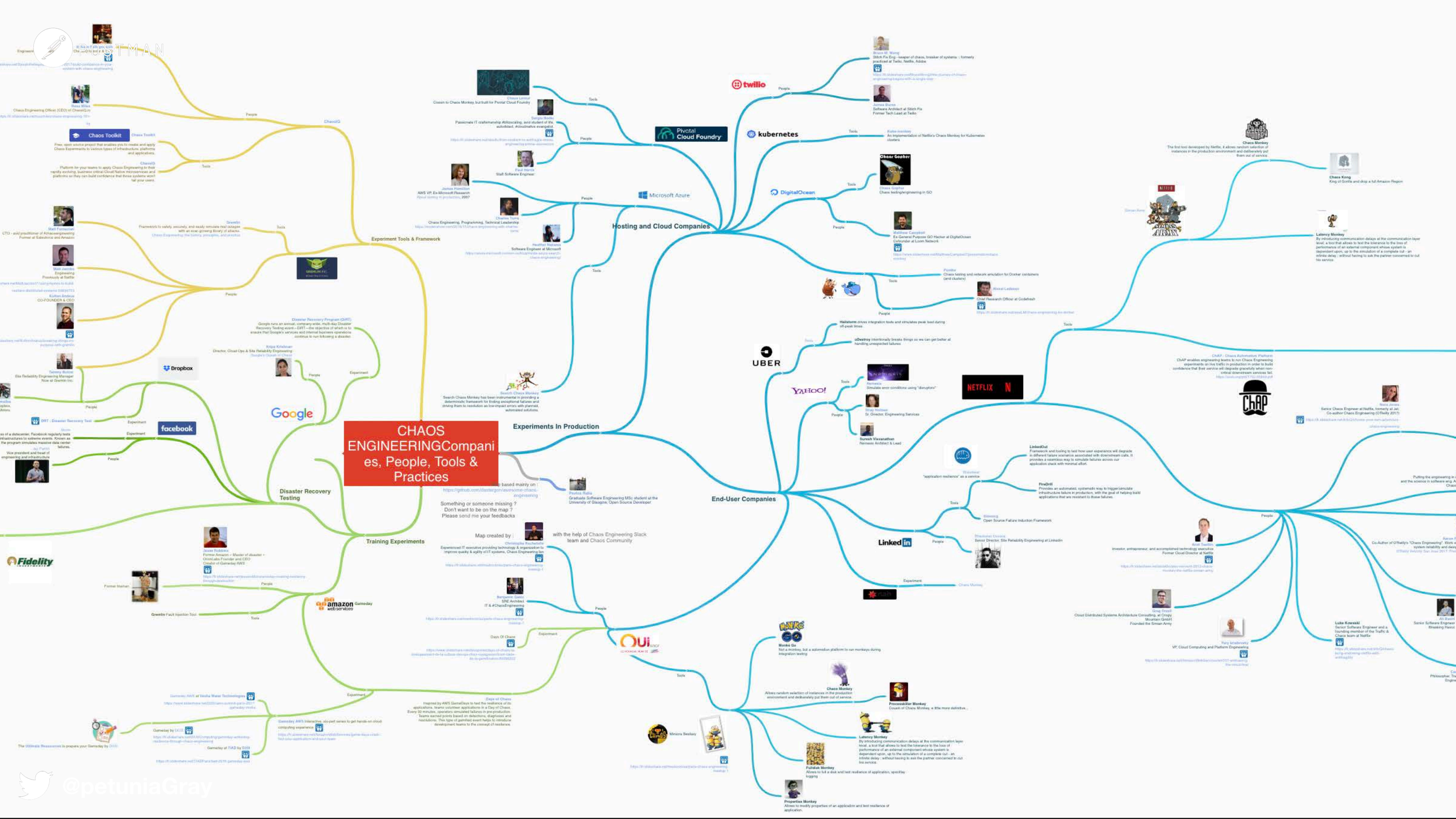
Who is responsible for chaos?


CHAOS ENGINEERINGCompanies, People, Tools & Practices
Experiment Tools & Framework
ChaosIQ
People
Tools
Chaos Toolkit
Chaos Toolkit
Free, open source project that enables you to create and apply Chaos Experiments to various types of infrastructure, platforms and applications.
ChaosIQ
Platform for your teams to apply Chaos Engineering to their rapidly evolving, business critical Cloud Native microservices and platforms so they can build confidence that those systems won't fail your users.
Gremlin
Framework to safely, securely, and easily simulate real outages with an ever-growing library of attacks.
Chaos Engineering: the history, principles, and practice
Matt Fornaciari
CTO - avid practitioner of #chaosengineering
Former at Salesforce and Amazon
Matt Jacobs
Engineering
Previously at Nuxtlix
Kolton Andrus
CO-FOUNDER & CEO
Tammy Butow
Site Reliability Engineering Manager
Now at Gremlin Inc
Training Experiments
Disaster Recovery Testing
Dropbox
DiRT - Disaster Recovery Test
Facebook
Jay Parikh
Vice president and head of engineering and infrastructure
Google
Disaster Recovery Program (DiRT)
Google runs an annual, company-wide, multi-day Disaster Recovery Testing event – DiRT – the objective of which is to ensure that Google's services and internal business operations continue to run following a disaster.
Kripa Krishnan
Director, Cloud Ops & Site Reliability Engineering
Google's Outreach on Chaos
Fidelity
Jesse Robbins
Former Amazon – Master of disaster + OmniLabs Founder and CEO
Creator of Gameday AWS
Former Ninjan
Gremlin Fault Injection Tool
amazon web services Gameday
Gameday AWS at Vesha Wetac Technologies
Gameday AWS interactive, six-part series to get hands-on cloud computing experience
Gameday by DXC
Gameday at FIAD by DXC
The DXCminds Ressources to prepare your Gameday by DXC
Days of Chaos
Inspired by AWS GameDays to test the resilience of its applications, teams volunteer applications in a Day of Chaos. Every 30 minutes, operators simulated failures in pre-production. Teams earned points based on detections, diagnoses and resolutions. This type of gamified event helps to introduce development teams to the concept of resilience.
Experiments In Production
Hosting and Cloud Companies
Pivotal Cloud Foundry
Chaos Lemur
Cousin to Chaos Monkey, but built for Pivotal Cloud Foundry
Sergio Bellei
Passionate IT craftsmanship #Bilioscaling, avid student of life, autodidact, #cloudnative evangelist
Paul Hinze
Staff Software Engineer
James Hamilton
AWS VP, Ex-Microsoft Research
About donkey in production, 2007
Charles Tunny
Chaos Engineering, Programming, Technical Leadership
Heather Nunnelee
Software Engineer at Microsoft
Microsoft Azure
twilio
Bruce M. Wong
Stitch Fix Eng - keeper of chaos, breaker of systems :: formerly practiced at Twilio, Netflix, Adobe
James Burns
Software Architect at Stitch Fix
Former Tech Lead at Twilio
kubernetes
Kube-monkey
An implementation of Netflix's Chaos Monkey for Kubernetes clusters
DigitalOcean
Chaos Gopher
Chaos testing/engineering in GO
Matthew Campbell
Ex-General Purpose GO Hacker at DigitalOcean
Cofounder at Loom Network
Pumba
Chaos testing and network emulation for Docker containers (and clusters)
Alexei Ledenev
Chief Research Officer at Codefresh
Search Chaos Monkey
Search Chaos Monkey has been instrumental in providing a deterministic framework for finding exceptional failures and driving them to resolution as low-impact errors with planned, automated solutions.
Paviou Ralia
Graduate Software Engineering MSc student at the University of Glasgow, Open Source Developer
Something or someone missing ?
Don't want to be on the map ?
Please send me your feedbacks
Map created by :
Christophe Rochefolle
Experienced IT executive providing technology & organization to improve quality & agility of IT systems, Chaos Engineering fan
with the help of Chaos Engineering Slack team and Chaos Community
Benjamin Gaiez
SRE Architect
IT & #ChaosEngineering
Days Of Chaos
Ouicare
End-User Companies
UBER
Hailstorm drives integration tests and simulates peak load during off-peak times.
uDestroy intentionally breaks things so we can get better at handling unexpected failures.
YAHOO!
Nemesis
Simulate error conditions using "disruptors"
Suraj Hariwal
Sr. Director, Engineering Services
Suresh Visvanathan
Nemesis Architect & Lead
NETFLIX
Chaos Monkey
The first tool developed by Netflix, it allows random selection of instances in the production environment and deliberately put them out of service.
Chaos Kong
King of Gorilla and drop a full Amazon Region
Latency Monkey
By introducing communication delays at the communication layer level, a tool that allows to test the tolerance to the loss of performance of an external component whose system is dependent upon, up to the simulation of a complete cut - an infinite delay -; without having to ask the partner concerned to cut his service.
ChAP - Chaos Automation Platform
ChAP enables engineering teams to run Chaos Engineering experiments on live traffic in production in order to build confidence that their service will degrade gracefully when non-critical downstream services fail.
Nora Jones
Senior Chaos Engineer at Netflix, formerly at Jet.
Co-author Chaos Engineering (OReilly 2017)
Waterfall
"application resilience" as a service
LinkedOut
Framework and tooling to test how user experience will degrade in different failure scenarios associated with downstream calls. It provides a seamless way to simulate failures across our application stack with minimal effort.
FireDrill
Provides an automated, systematic way to trigger/simulate infrastructure failure in production, with the goal of helping build applications that are resistant to those failures.
Slitherio
Open Source Failure Induction Framework
LinkedIn
Bhaskaran Devaraj
Senior Director, Site Reliability Engineering at LinkedIn
Chaos Monkey
Alvaro Videla
Investor, entrepreneur, and accomplished technology executive
Former Cloud Director at Netflix
Greg Orzell
Cloud Distributed Systems Architecture Consulting, at Cinqlo
Mountain GmbH
Founded the Simian Army
Yury Izrailevsky
VP, Cloud Computing and Platform Engineering
Luke Kowoski
Senior Software Engineer and a founding member of the Traffic & Chaos team at Netflix
Monkey Go
Not a monkey, but a automation platform to run monkeys during integration testing
Chaos Monkey
Allows random selection of instances in the production environment and deliberately put them out of service.
Processkiller Monkey
Cousin of Chaos Monkey, a little more definitive...
Latency Monkey
By introducing communication delays at the communication layer level, a tool that allows to test the tolerance to the loss of performance of an external component whose system is dependent upon, up to the simulation of a complete cut - an infinite delay -; without having to ask the partner concerned to cut his service.
Fulduk Monkey
Allows to full a dice and test resilience of application, specifiqy trigging
Properties Monkey
Allows to modify properties of an application and test resilience of application.
Minions Bestiary
Tools
People
Experiment
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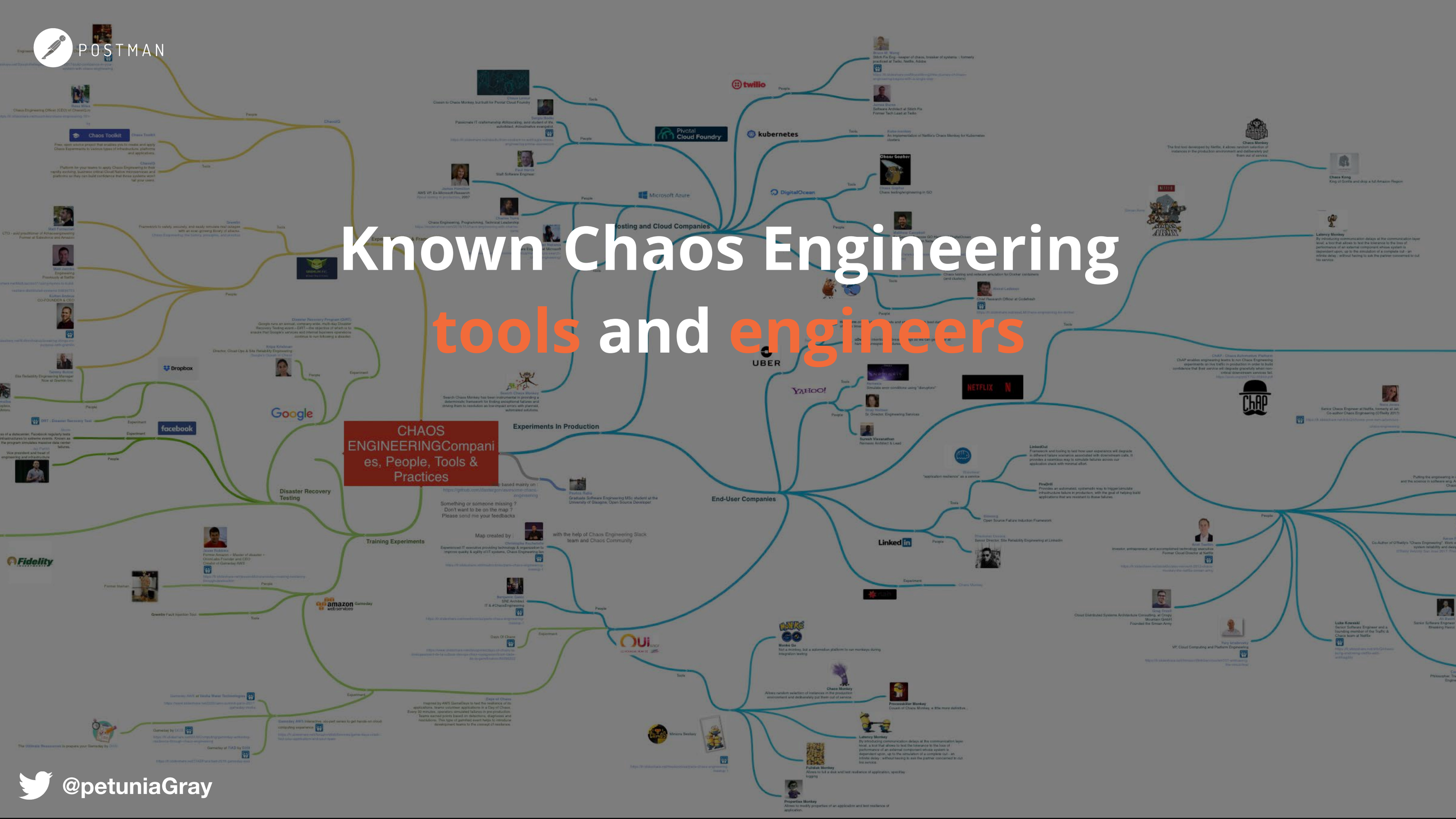
Known Chaos Engineering tools and engineers



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Which job titles are doing chaos?

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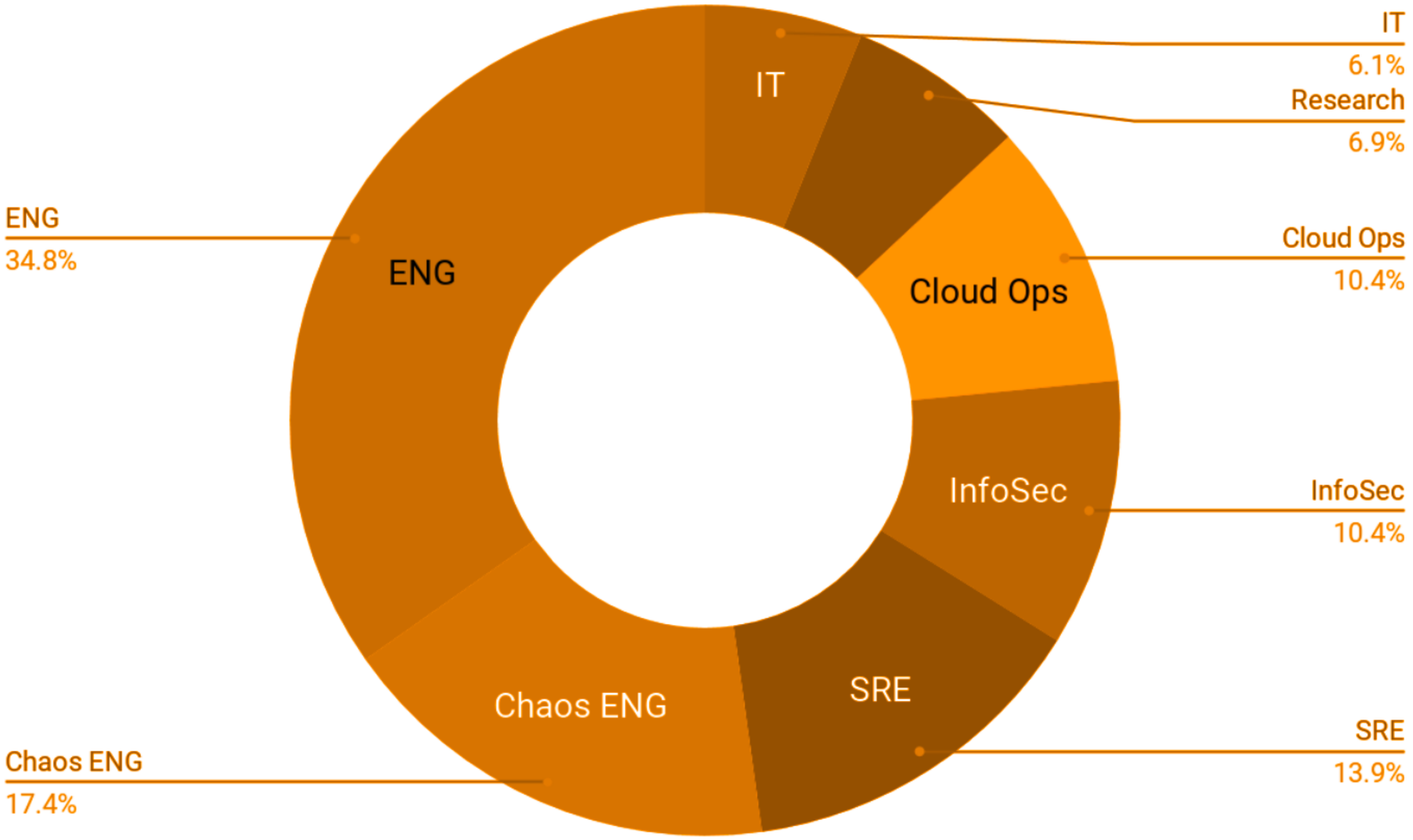
By Job Title



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It boils down to who gets paged - if that's an SRE or Ops team they have the most incentive to start doing this work and making their lives better.

- Kolton Andrus, CEO at Gremlin

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Responsibilities

- **Chaos specialists**

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Responsibilities

- Chaos specialists
- **Deployment and uptime**

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Responsibilities

- Chaos specialists
- Deployment and uptime
- **Incident management**

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Responsibilities

- Chaos specialists
- Deployment and uptime
- Incident management
- **Domain knowledge experts**

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Responsibilities

- Chaos specialists
- Deployment and uptime
- Incident management
- Domain knowledge experts
- **Testing in Production**

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Roles

- Site Reliability engineer
- Production engineers
- DevOps engineers
- InfoSec engineer
- Research analyst

Why aren’t testers doing chaos?

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Before there was Chaos Engineering,
there was Chaos Testing
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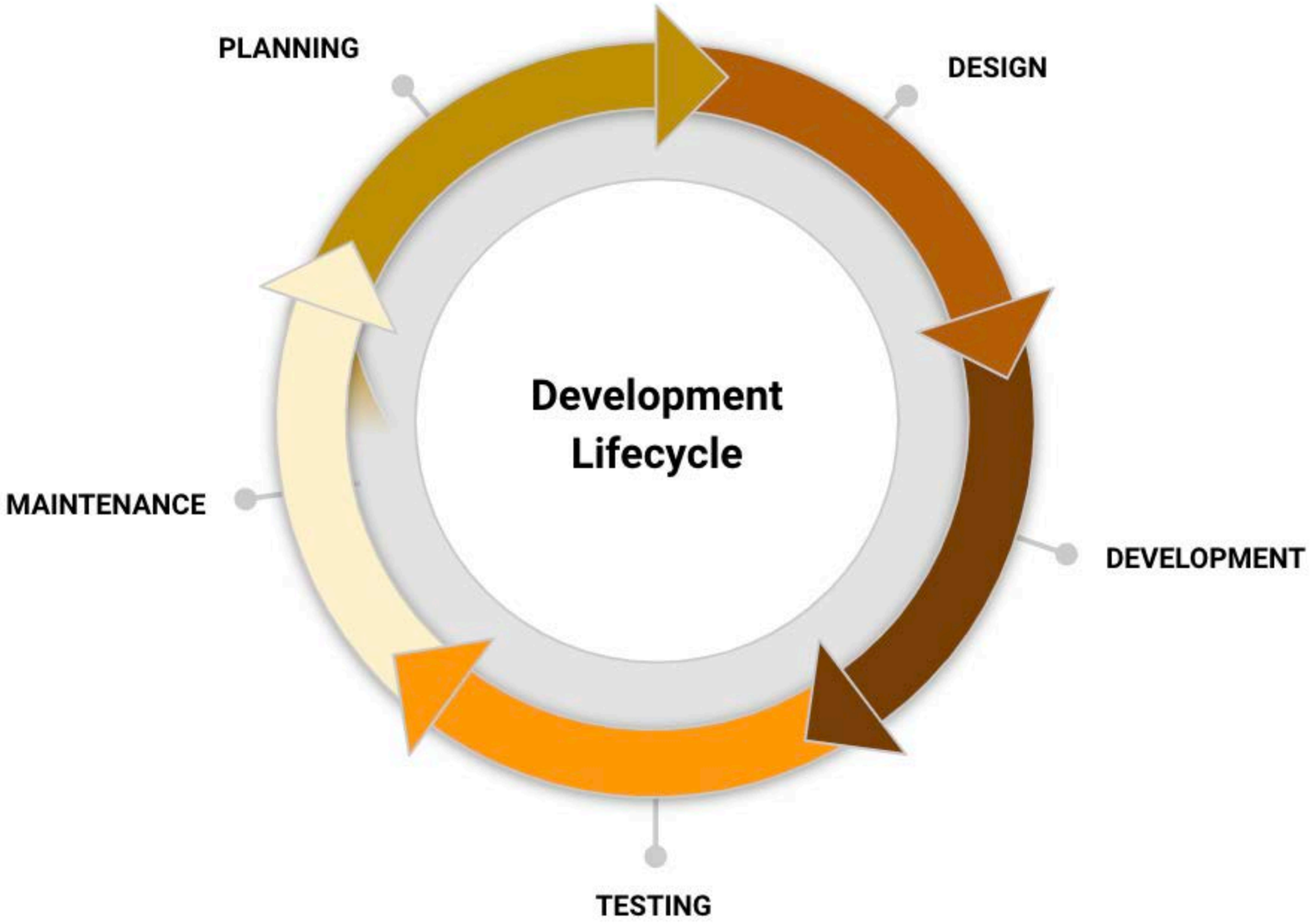
Software Development Lifecycle



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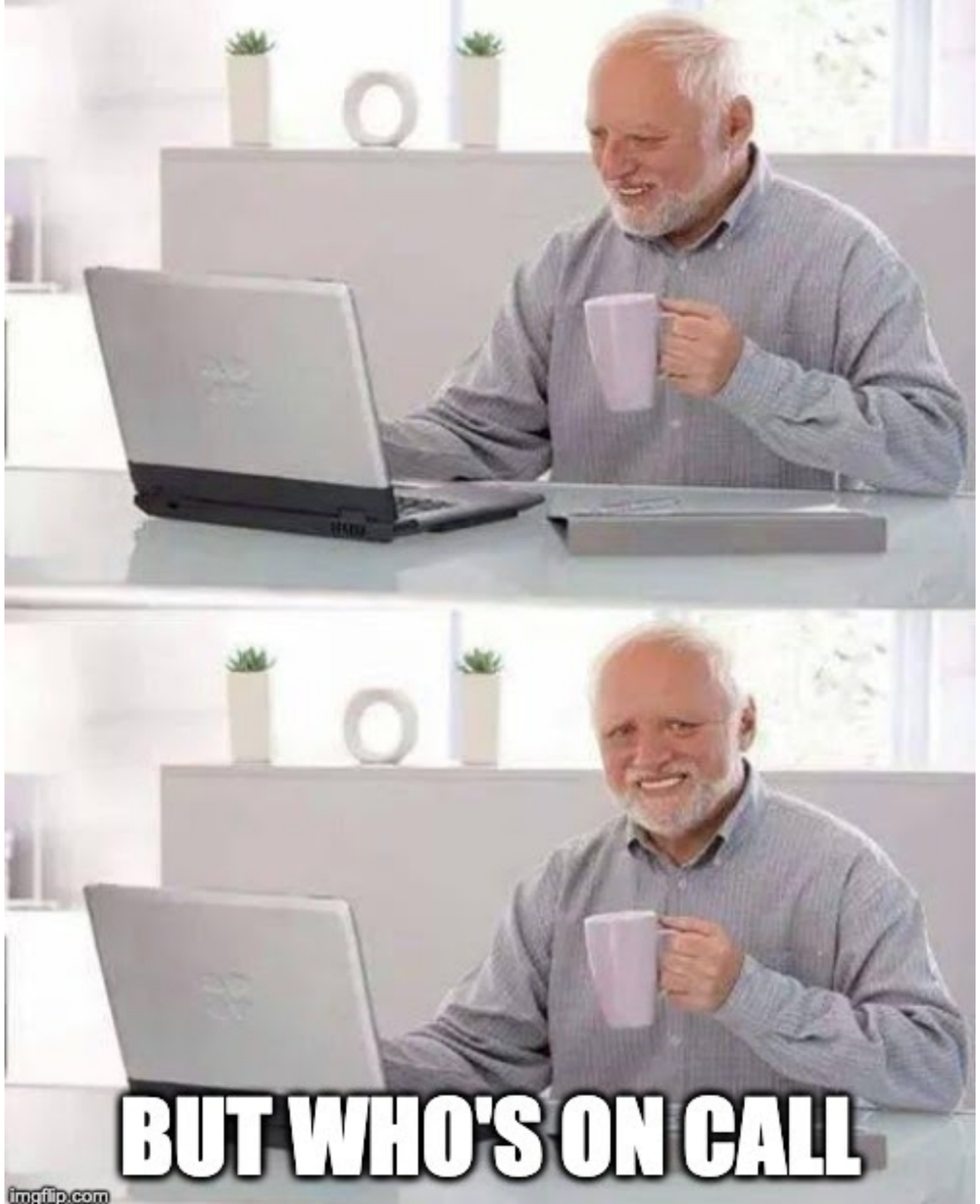
It was called chaos testing



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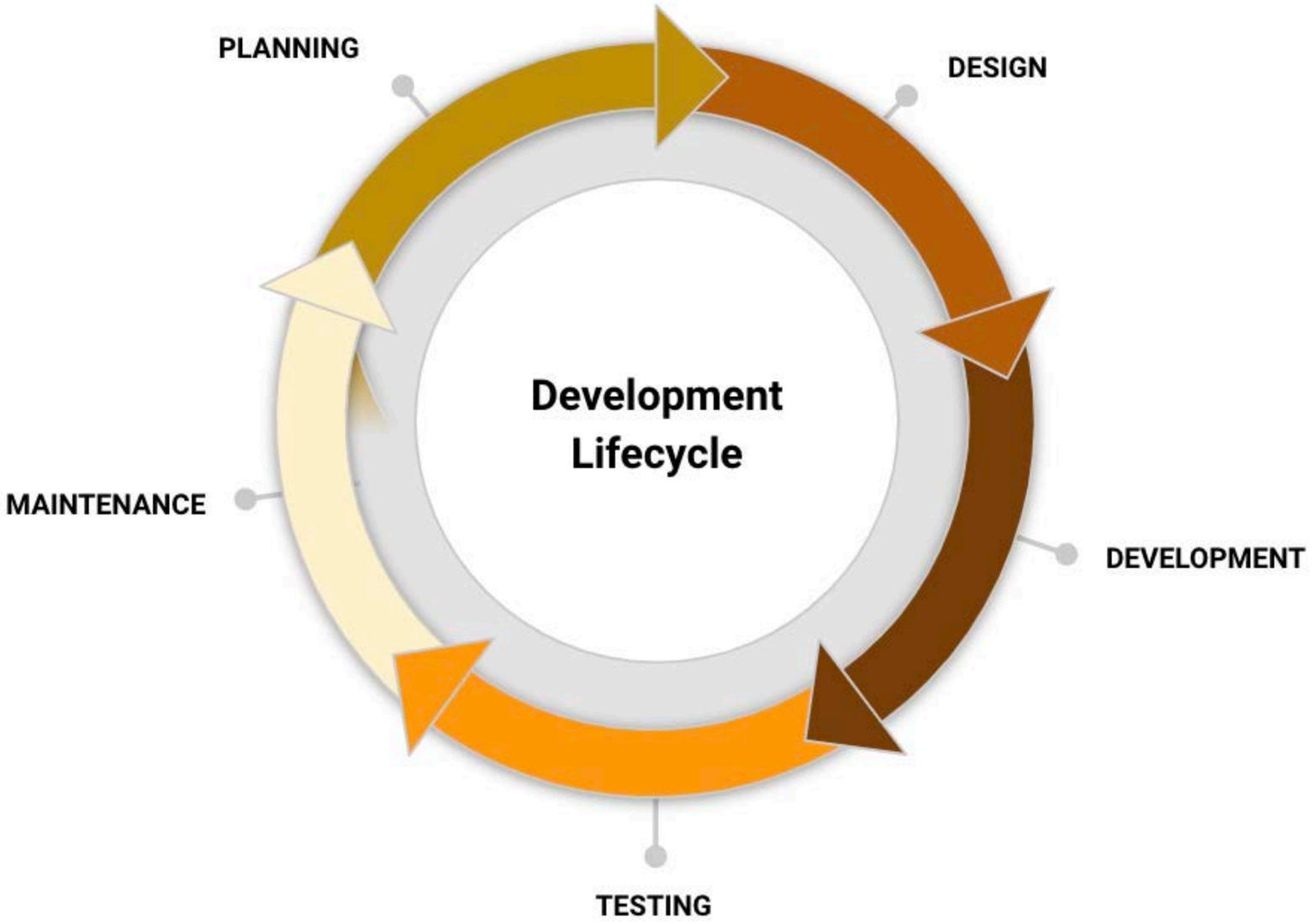
Software Development Lifecycle



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The biggest limitation in the fear of delivering software faster is the focus on adding more pre-release testing.

- Abby Bangser, Platform Test Engineer at MOO

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...building confidence that we aren't fragile.

- Abby Bangser, Platform Test Engineer at MOO

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Testers doing chaos?!

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Testers doing chaos?!

- Focused on pre-release testing
- Early research and pilots
- Automation of chaos experiments

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Our engineers come up with the chaos experiments, and then our testers run and automate them.

- Director of Engineering, Very Large Company

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Who can start a chaos program?

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Who has?

- Insights

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Who has?

- Insights
- **Access**

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Who has?

- Insights
- Access
- **Buy-in**

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There’s a directive from our CTO to start a chaos program [after losing $600M in 22 minutes].

- Director of Testing, Anonymous

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Do I need to wait for a catastrophe?

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Perhaps aggregate bits and pieces from different [resilience engineering] frameworks that appeal to you, and then create a practice around it.

- Casey Rosenthal, CEO at Verica

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I wish the best of luck to you in that undertaking, but I wouldn't wager that you get it right on your first try. Or your second.

- Casey Rosenthal, CEO at Verica

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Final thoughts

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More adoption of chaos engineering

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A shift in roles and responsibilities

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Building a culture of resilience

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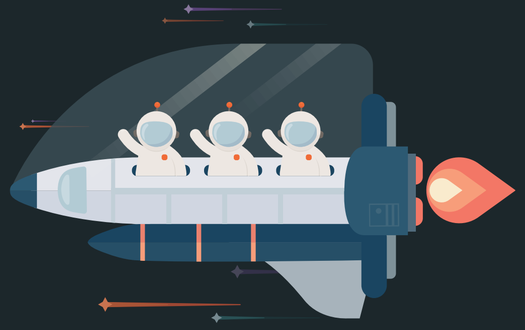

Thank you

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Resources

Building resilient APIs with chaos engineering

better practices blog

Chaos leaders and tools

chaos slack community

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