Compromising AWS® for fun and profit

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Prepare, Protect, Persist®

- **Prepare**
- We help you and your partners to understand how to identify and resolve potential security issues at the earliest stages with hands on 'hack yourself first', threat modelling and GDPR compliance workshops as well as security training for non-technical colleagues.
- **Protect**
- Using automated and manual penetration testing techniques, we provide a comprehensive security report for your Web and mobile applications, including API testing, and networks. The report highlights potential issues and their resolutions.
- **Persist**
- We ensure that your organisation benefits from continual improvements in security levels through information assurance processes, auditing and certification including ISO27001:2013 and Cyber Essentials.

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Bingo

Bingo Caller's Card		
Brexit	Blockchain	AI
Machine Learning	AWS	Cloud
Cyber	Computer Misuse Act	Privileges

https://vsltd.co/bsBingo

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Qualifications

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Shared Responsibility Model

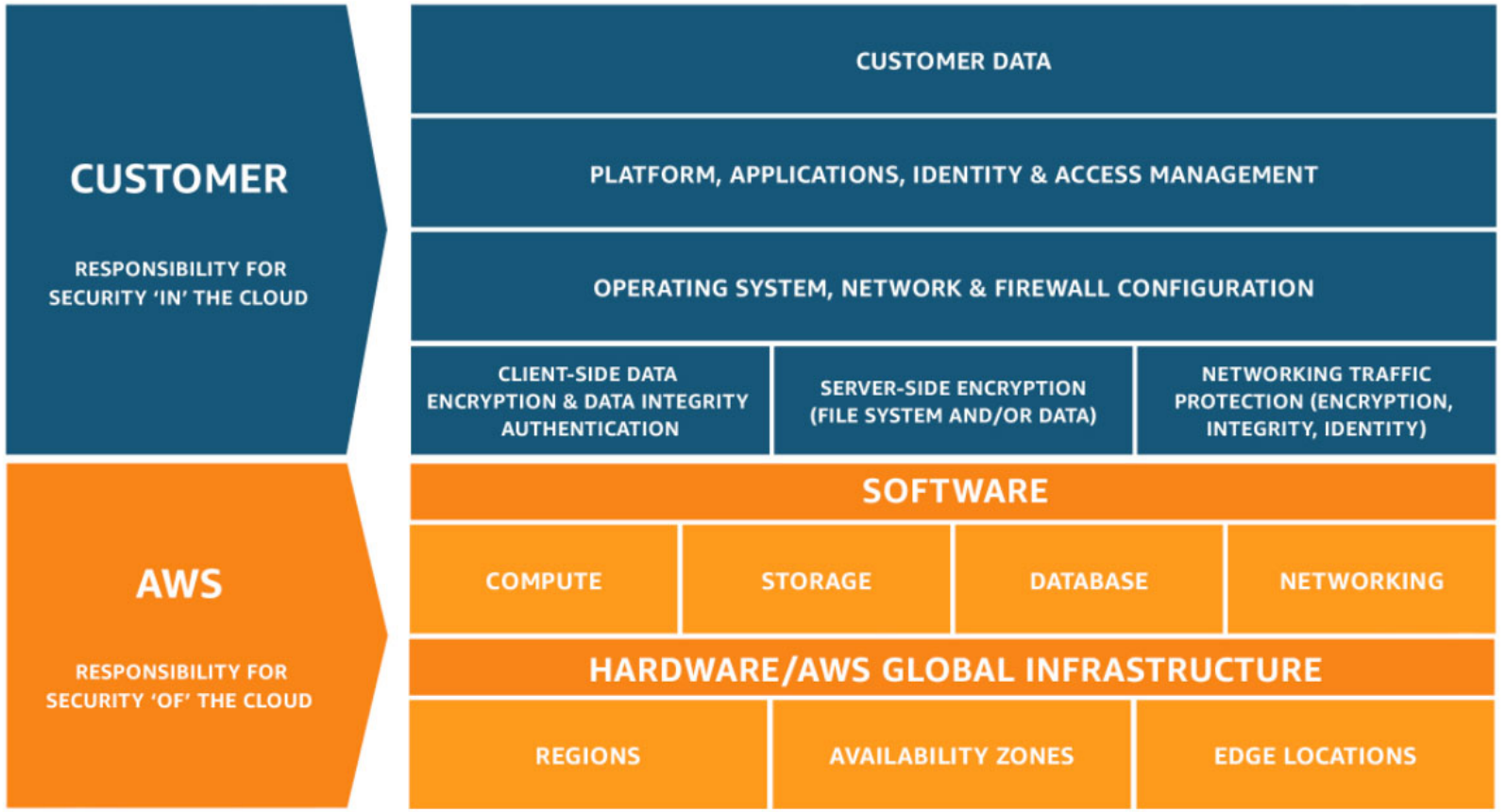

Image from: https://aws.amazon.com/compliance/shared-responsibility-model/

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What do attackers want?

Tesla Hackers Hijacked Amazon Cloud Account to Mine Cryptocurrency

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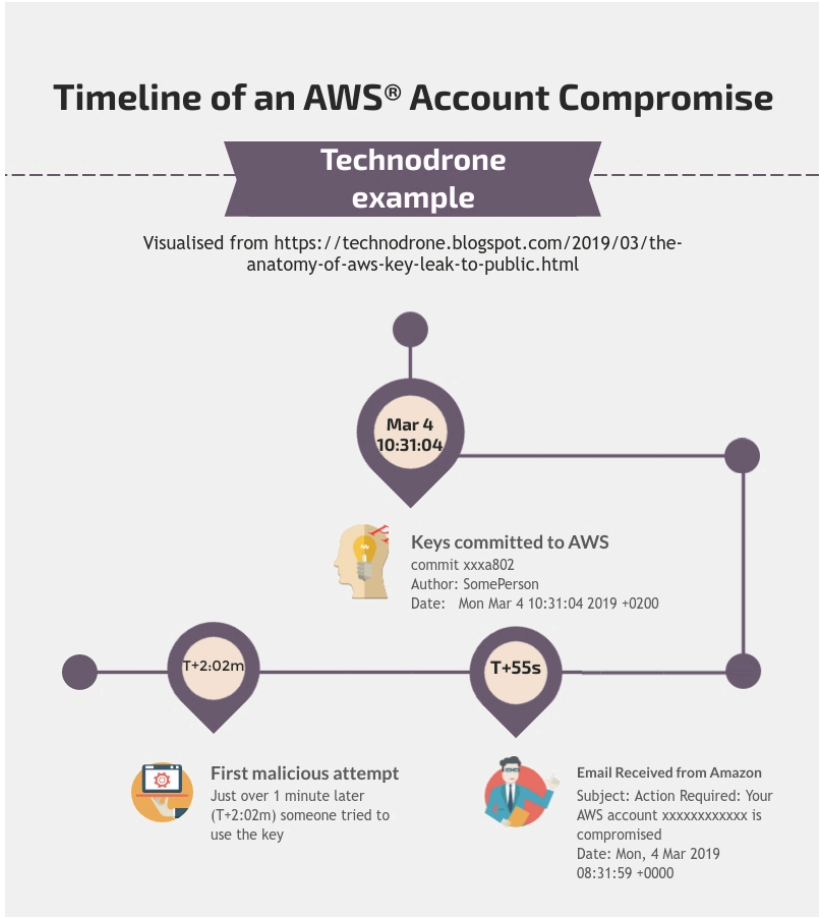
Working fast

- IAM is confusing
- Use principle of least privilege
- Never commit credentials



https://technodrone.blogspot.com/2019/03/the-anatomy-of-aws-key-leak-to-public.html

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IAM

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Let’s have a play

All exploits are being performed in a safe environment

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Example 1 – EC2 escalation

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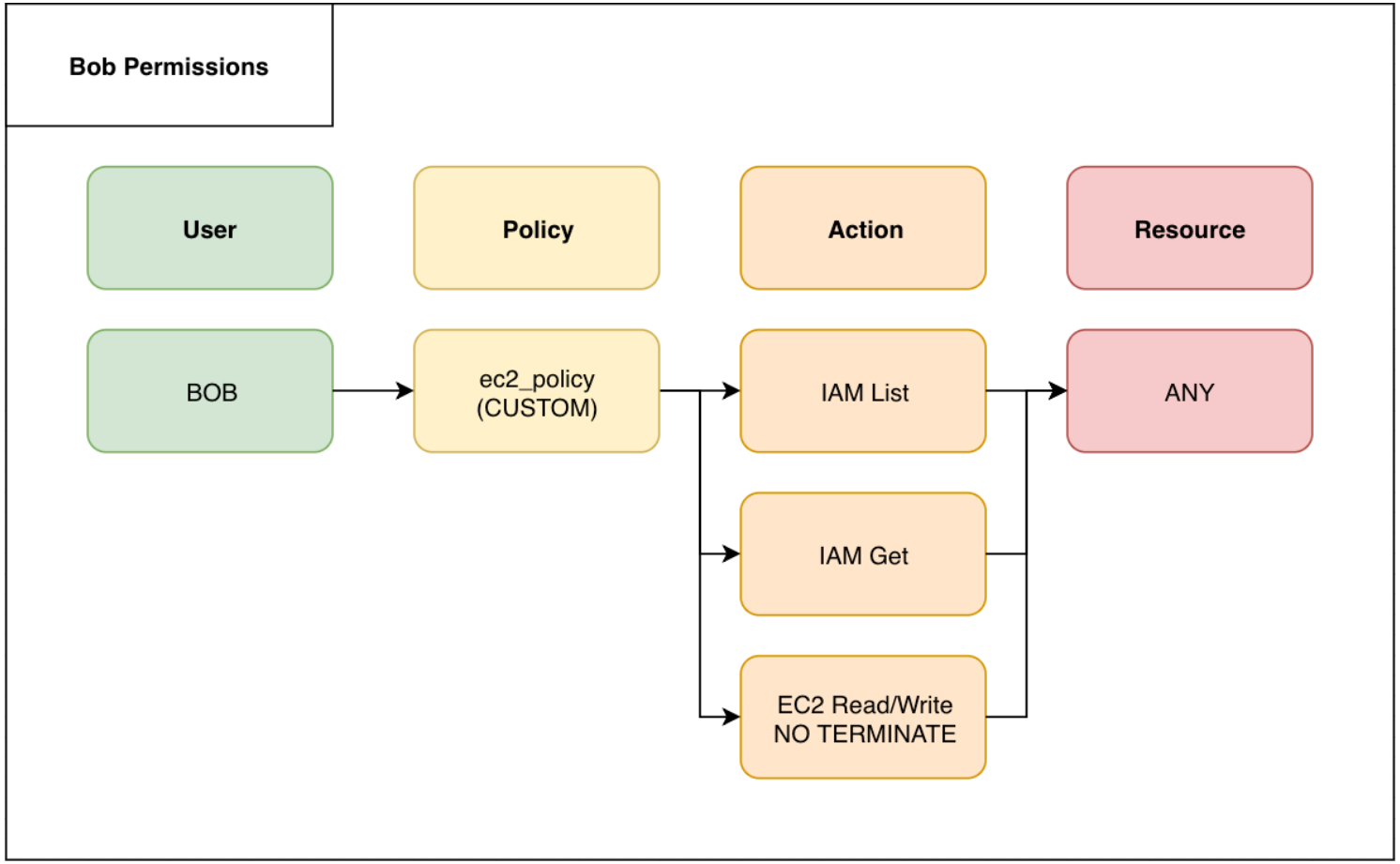
Bob's permissions



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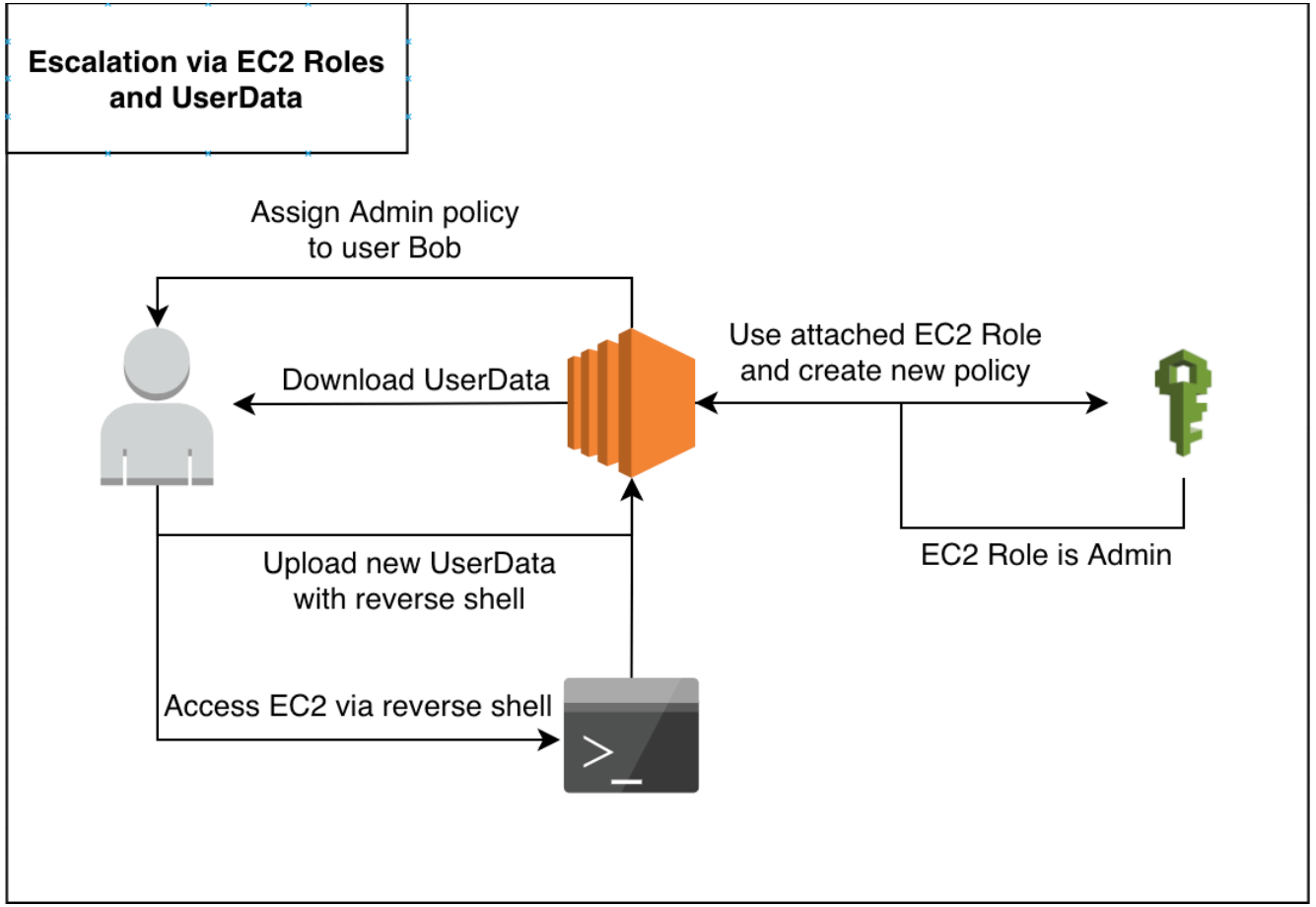
The process



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Example 2 - Escalation to IAM Administrator

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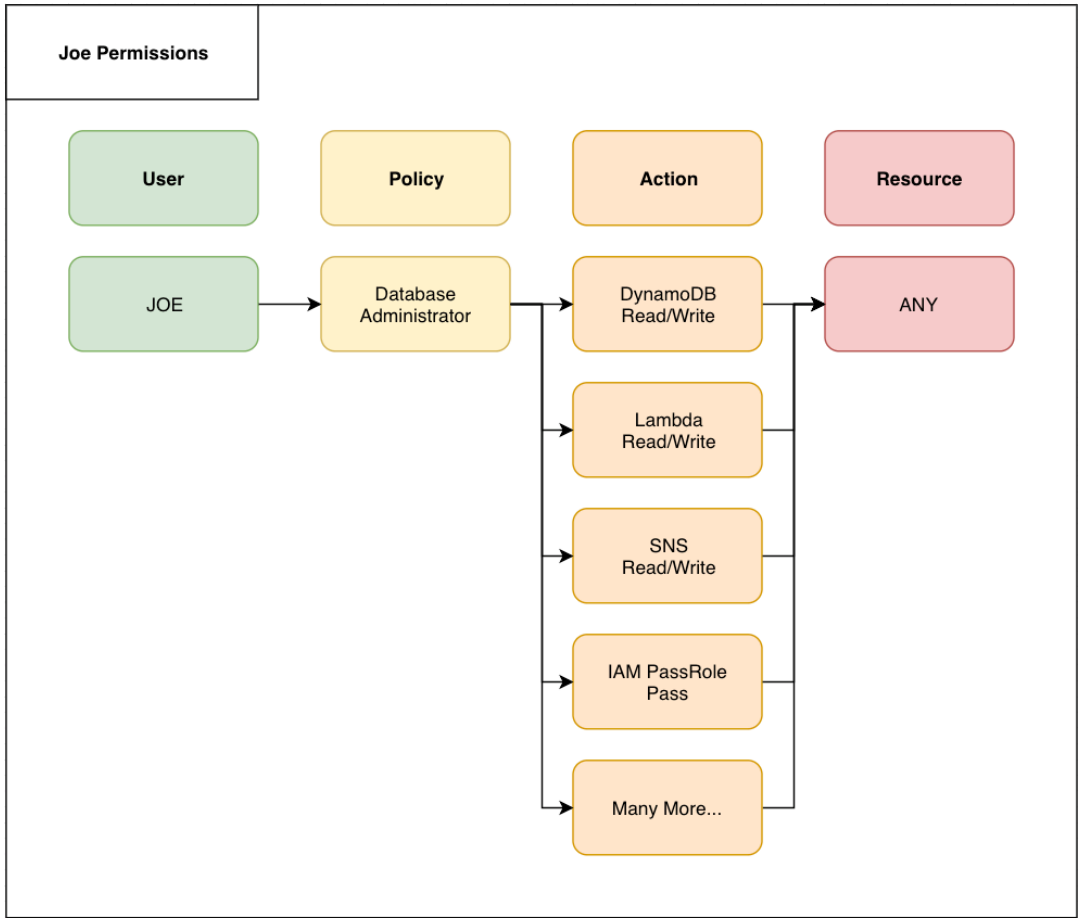
Joe’s permissions



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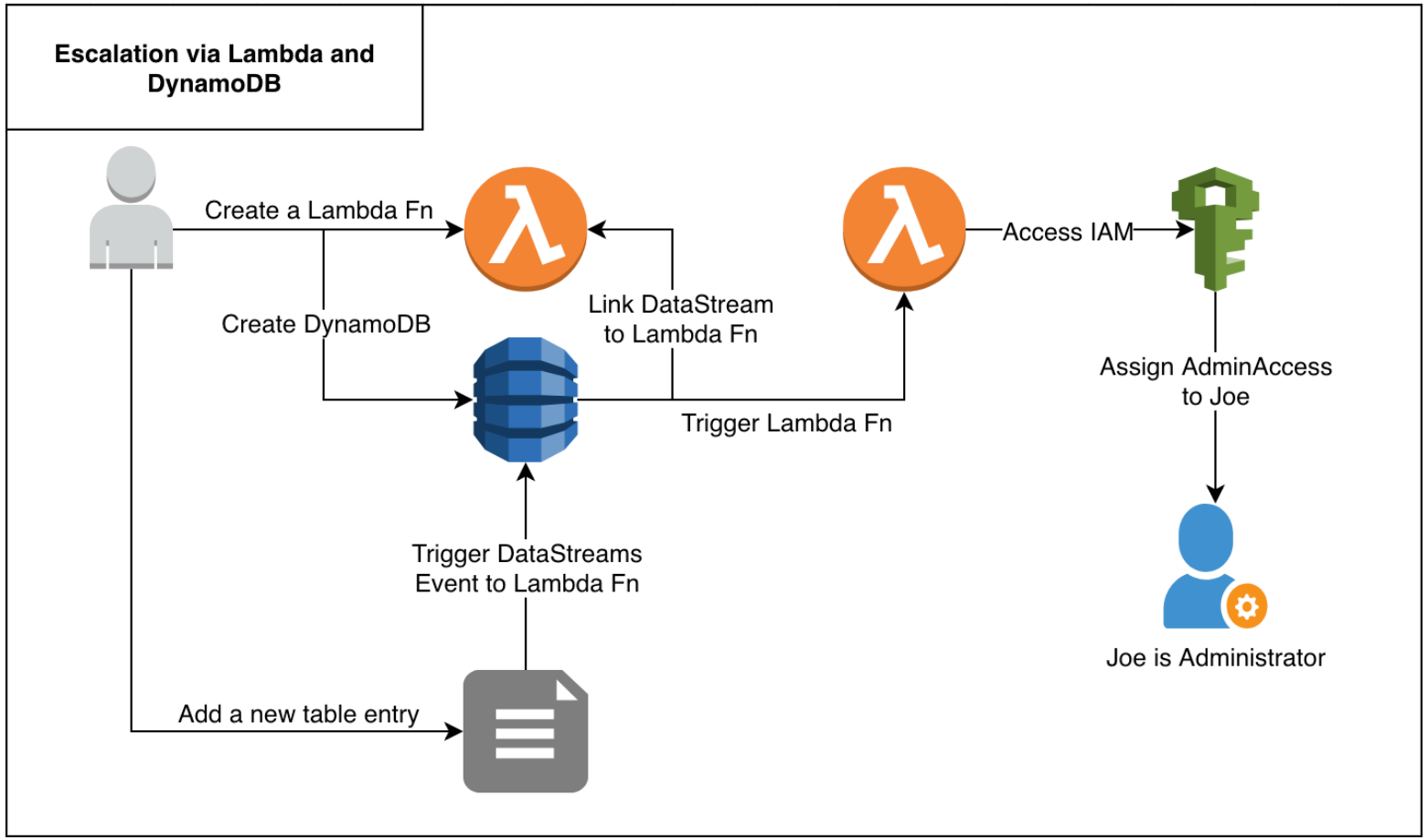
The process



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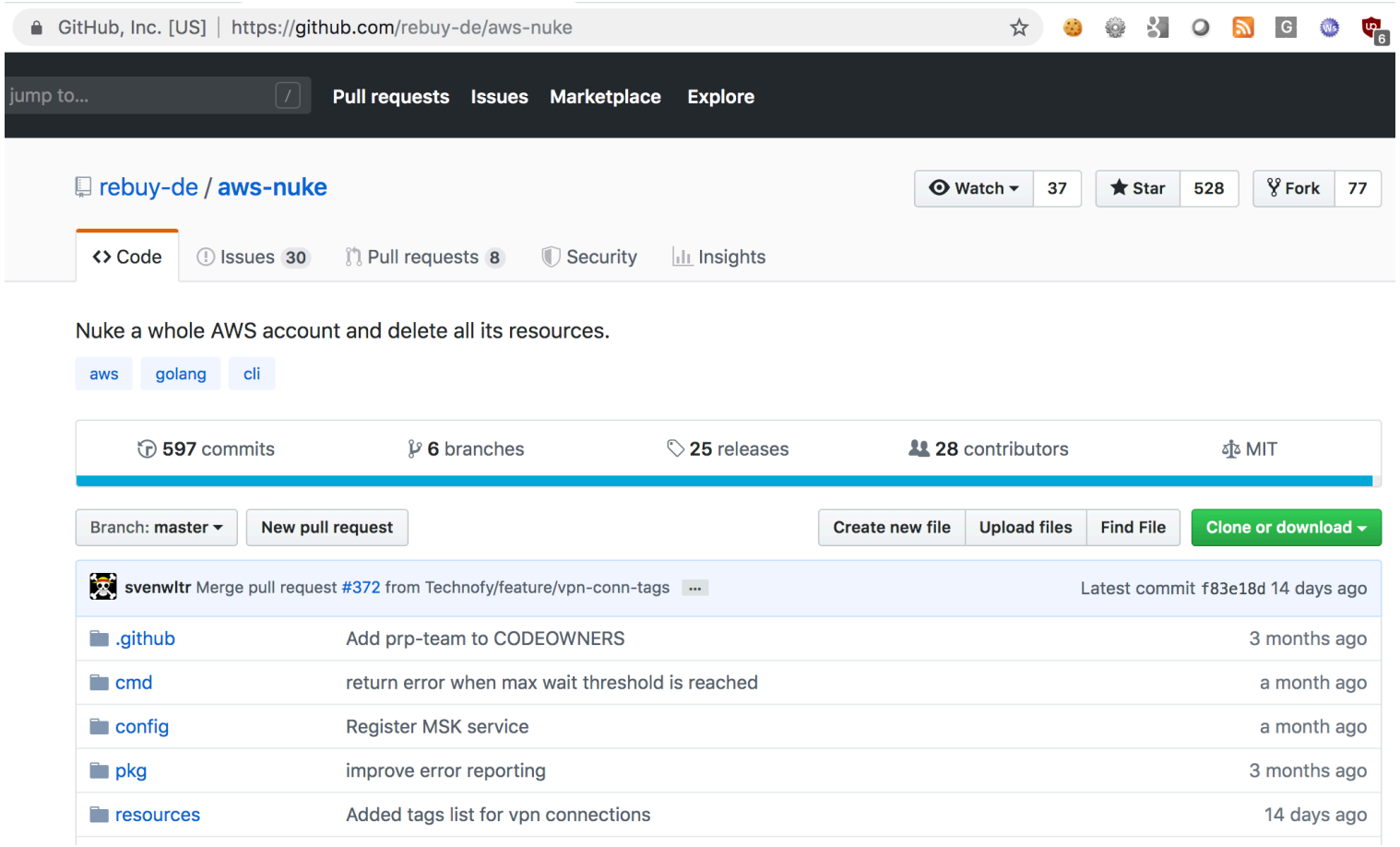
Consequences



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Fun and Profit

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Try for yourself

- Cloudgoat - https://github.com/RhinoSecurityLabs/cloudgoat

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Protection Measures

- Ask questions
  - Some great advice from UK NCSC
- Secure users
- Reduce privileges
- Implement tools to help you

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Bingo results

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Questions?

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https://vsltd.co/NIDevConf19