Top 5 Security Tips for Developers in AWS

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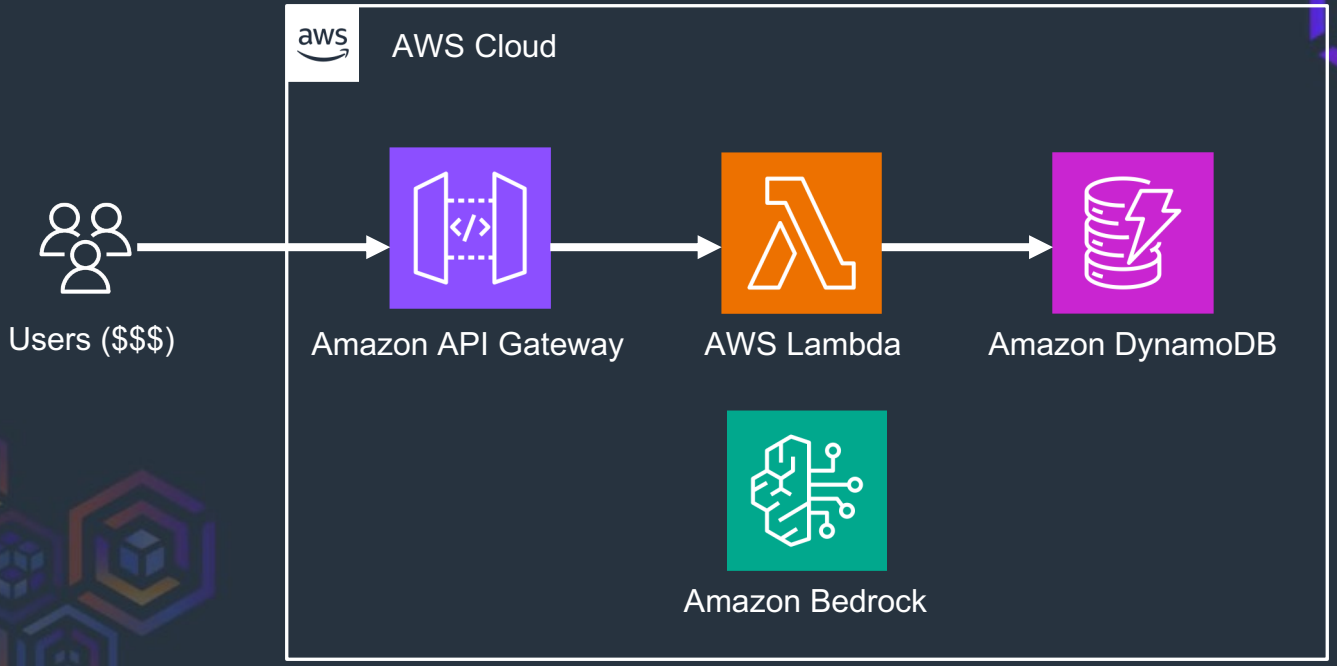
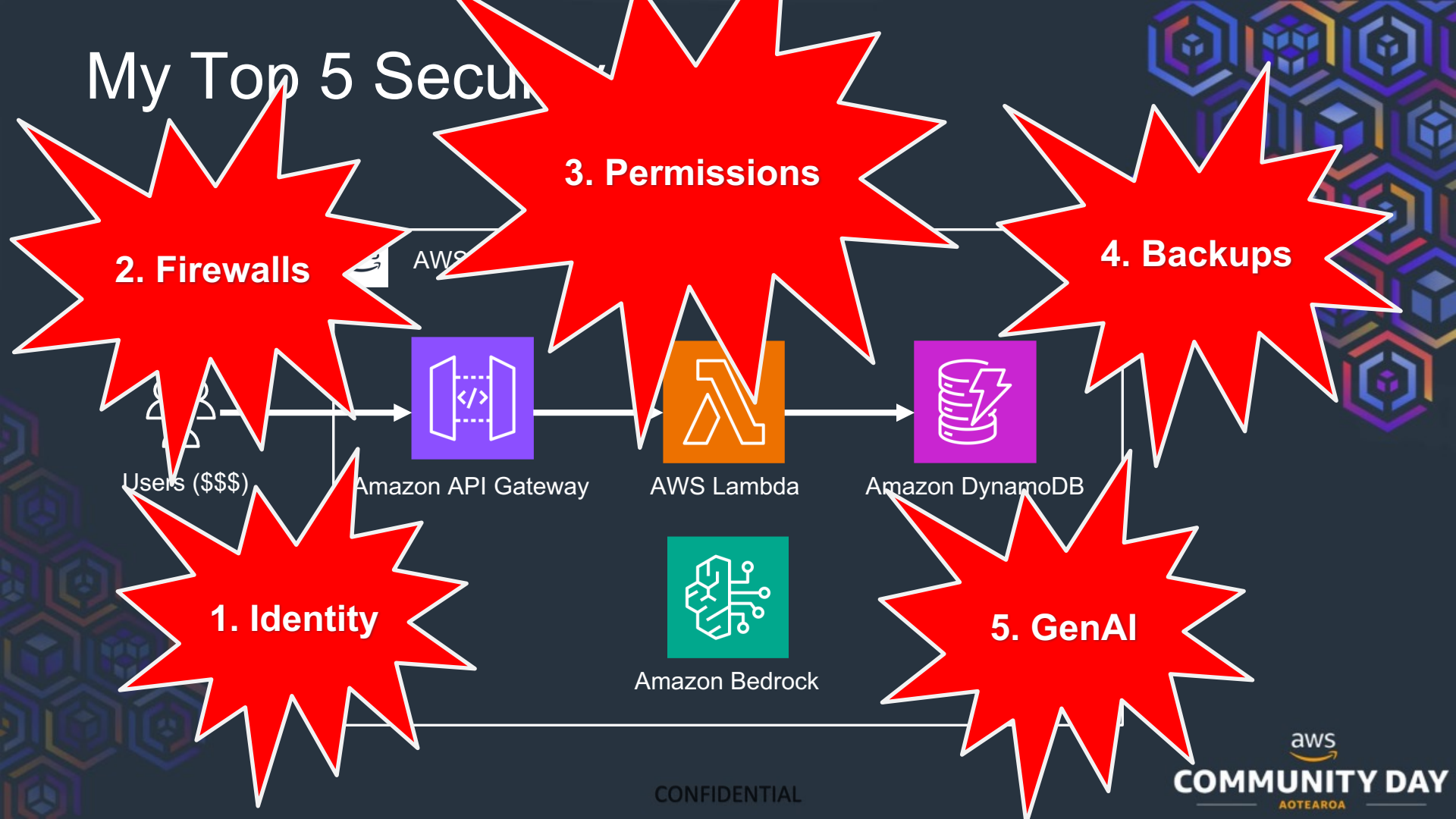
Your Application – Go live!



What the internet is like?

My Top 5 Secu



Tip #1: Identity Matters

Why does “identity” matter? What’s the risk?

- The AWS Console is open to the world!
- Anyone can login if your password is weak
- From there they can own your environment

So, how do you prevent this?

- ✓ MFA, or Multi-Factor Authentication, is your friend
- ✓ Use a strong password (i.e. Password Manager)
- ✓ Create IAM Users. Take care with the root user

Tip #1: Identity Matters

Remember:

- *A password is “something you know”*
- *MFA is “something you have.”*
- *Apart from initial setup, don’t use your root user.*

Tip #2: Firewalls

Why do “firewalls” matter? What’s the risk?

- Expect the unexpected! e.g. Bots!
- Common attacks: e.g. Brute Force or SQL Injection
- e.g. DDoS (Distributed Denial of Service)

So, how do you prevent this?

- ✓ AWS Cloudfront CDN (Content Delivery Network)
- ✓ Limit Access to just your Users
- ✓ AWS WAF (Web Application Firewall)

Tip #2: Firewalls

Remember:

- *Don’t expose your app and hope!*
- *Use AWS WAF*
- *Use AWS Cloudfront*

Tip #3: Permissions

Why do “permissions” matter? What’s the risk?

- What if a bad actor gets in?
- What damage could be done?
- Do you have good Segmentation?

So, how do you prevent this?

- ✓ Use VPC (Virtual Private Cloud) and Subnets
- ✓ Kept Security Groups tight
- ✓ Avoid Wildcards (*) in Permissions and Policies

Tip #3: Permissions

Remember:

- *Use VPCs and Subnets*
- *Tighten Security Groups*
- *Tighten IAM Policy Permissions*

Tip #4: Backups

Why do “backups” matter? What’s the risk?

- What if a bad actor gets to your data?
- Could they delete it?
- Could they hold you to ransom?

So, how do you prevent this?

- ✓ Use AWS Backup and Infrastructure as Code (IaC)
- ✓ Type of data? e.g. Federate for User data
- ✓ Use Encryption! E.g. AWS KMS (Key Management Service)

Tip #4: Backups

Remember:

- *Backups and Infrastructure as Code*
- *Type of data*
- *Encryption*

Tip #5: GenAI

Why does “GenAI” matter? What’s the risk?

- More apps are using it!
- Lack of awareness
- E.g. Inadvertently uploading information

So, how do you prevent this?

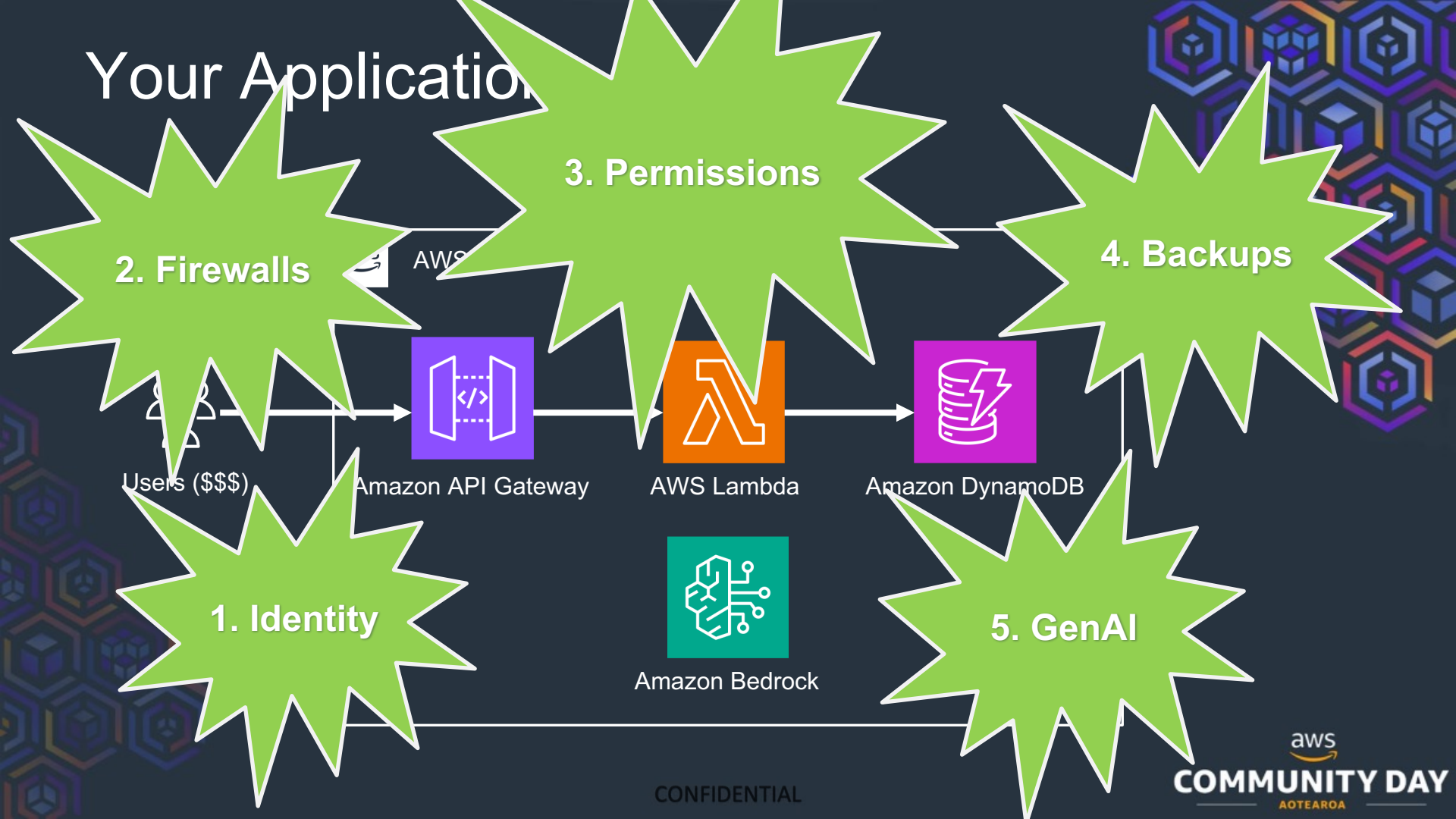
- ✓ Been mindful of where your information is going
- ✓ Amazon Q Developer and Amazon Bedrock
- ✓ Retrieval-Augmented Generation (RAG)

Tip #5: GenAI

Remember:

- *Been smart about where your information is going*
- *Keep it contained and safe*
- *Use AWS services like Amazon Q Developer and Amazon Bedrock*

Your Applicatio



Thank you!

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Please note: No Unicorns were harmed during the creation of this presentation