AWS Well-Architected Framework

Enhancing Security in AWS Cloud with WAFR (Well-Architected Framework Review)

BRAIN STATION

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Advanced Consulting Partner

aws
PARTNER
Well-Architected Partner Program

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CTO, Brain Station 23

AWS Partner Network (APN) Ambassador

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Advanced
Consulting
Partner

BRAIN STATION 23

Market Served:
Bangladesh, UK, USA, Netherlands, Germany, Norway, Denmark, Switzerland, Spain, Australia, Canada, Japan, Turkey, Middle East

No of employees: 700+
Certified Professionals: 150+
Project Delivered: 200+

aws PARTNER Advanced Tier Services

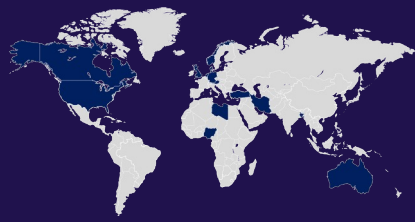
- Well-Architected Partner Program
- Public Sector
- Immersion Day
- Solution Provider
- Amazon EC2 for Windows Server Delivery

AWS Service Offers:

- DevOps
- Consultancy
- Managed Service
- Migration
- Well-Architected Framework Review
- EC2 for windows delivery
- Startup packages
- Marketplace offers

CLOUD 23

Website: https://cloud-23.com



Cloud As Service At A Glance

We Provide All In One Cloud Solution

We've completed **30+** Well Architecte Review for AWS in last 8 months.

We've successfully done **20** Migration project on AWS.

We've **50+** DevOps resources engaged in various projects.

We're engaged in **20+** Managed Service projects for our clients.

We've multiple **Hybrid Cloud** projects running in **Telco & Banks.**

We've completed **10+** EC2 for windows/Linux delivery projects.

We've given consultancy support for **200+** customers as of yet.

We are trusted billing partner for **50+** clients as of now.

BT, NISSAN, PayPal, DKV, Maruboshi Central & Eastern Europe, Unipet, abbvie, axiata, telenor, city bank, Senscom

We've built largest live gaming knowledge-based quiz app for the leading telco provider in Bangladesh. Which could serve more than 3 million advertisement views every day. (Link)

We've built & migrated the complex environment for a clinical-stage biotechnology company in Norway. Who are also one of the largest pharmaceutical companies in the world. (Link)

AWS Well-Architected Framework

Operations

Security

Reliability

Performance efficiency

Cost optimization

Sustainability

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AWS Well-Architected Framework

Pillars

Name	Questions answered	High risks	Medium risks
Operational Excellence	0/11	0	0
Security	0/11	0	0
Reliability	0/13	0	0
Performance Efficiency	0/8	0	0
Cost Optimization	0/11	0	0
Sustainability	0/6	0	0

Security

- Key Areas
  - Visibility
  - Auditability
  - Controllability
  - Agility

Security is Visible

- Who is accessing the resources?
- Who took what action?
  - When?
  - From where?
  - What did they do?
  - Logs Logs Logs

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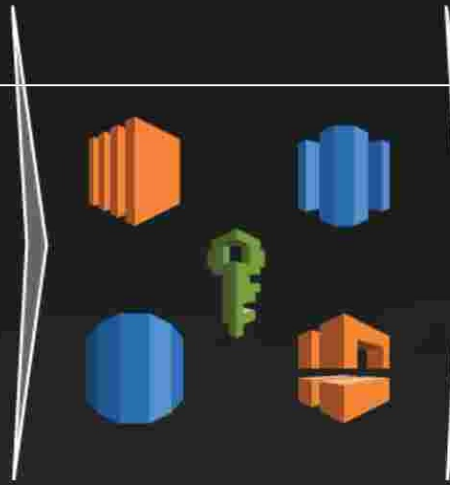
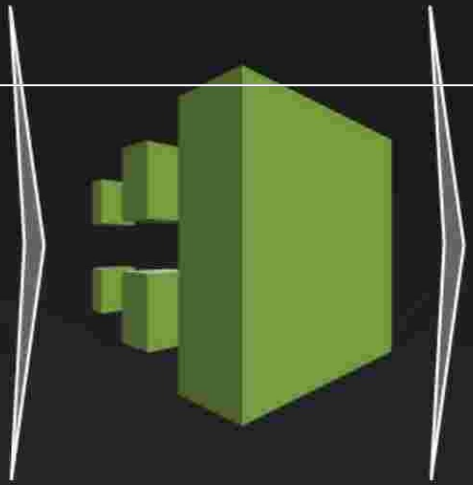
AWS CLOUDTRAIL

You are making API calls...



On a growing set of services around the world…



AWS CloudTrail is continuously recording API calls…

User	Action	Time
Tim	Created	1:30pm
Sue	Deleted	2:40pm
Kat	Created	3:30pm

And delivering log files to you

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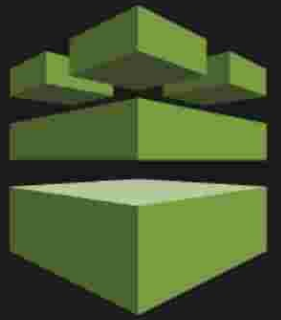
Use cases enabled by CloudTrail

- Security Analysis
  - Use log files as an input into log management and analysis solutions to perform security analysis and to detect user behavior patterns
- Track Changes to AWS Resources
  - Track creation, modification, and deletion of AWS resources such as Amazon EC2 instances, Amazon VPC security groups and Amazon EBS volumes
- Troubleshoot Operational Issues
  - Identify the most recent actions made to resources in your AWS account
- Compliance Aid
  - Easier to demonstrate compliance with internal policies and regulatory standards

SECURITY IS AUDITABLE

AWS Config



AWS Config is a fully managed service that provides you with an inventory of your AWS resources, lets you audit the resource configuration history and notifies you of resource configuration changes.

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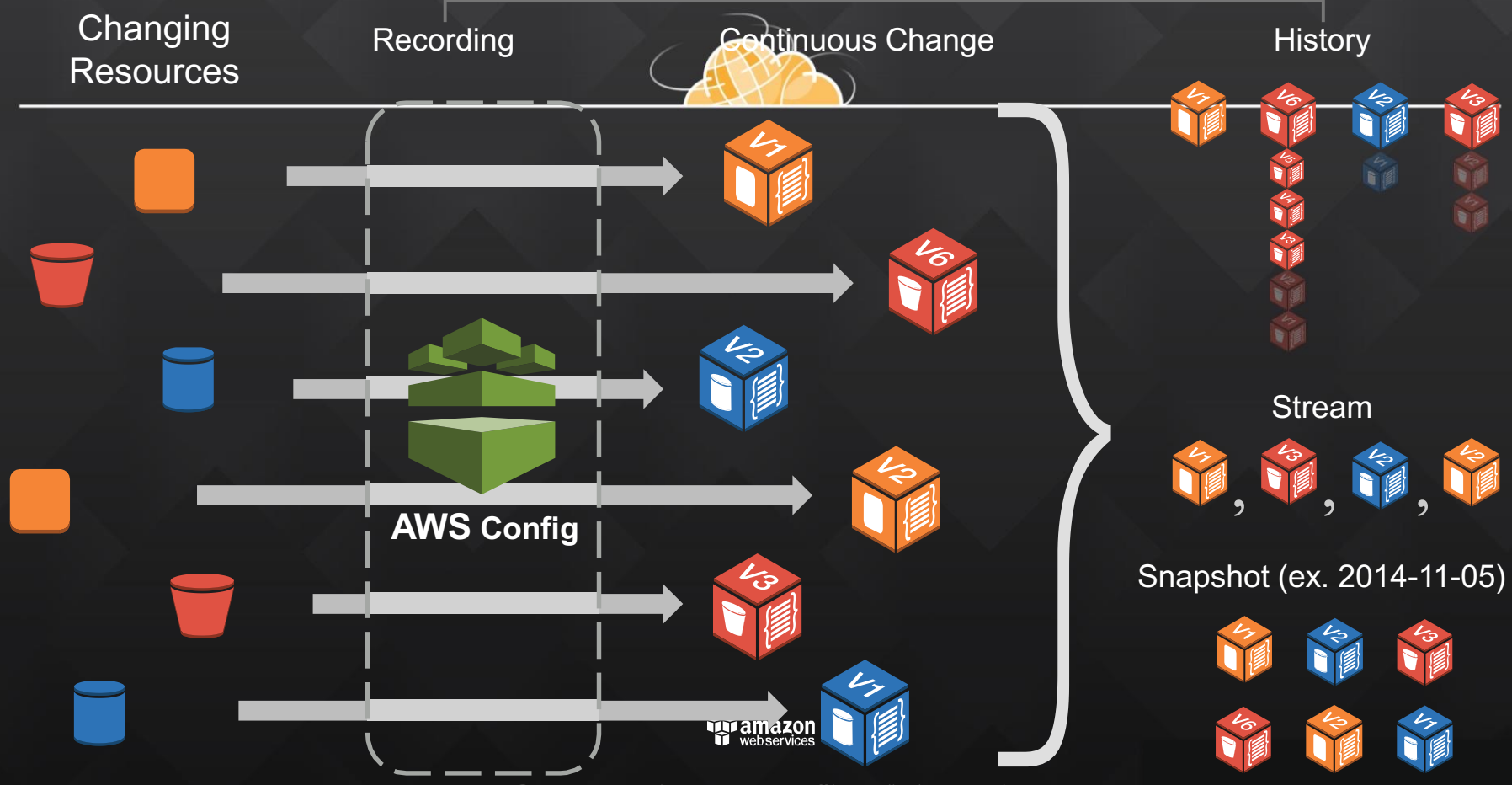
AWS Config



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Use cases enabled by Config

- Security Analysis: Am I safe?
- Audit Compliance: Where is the evidence?
- Change Management: What will this change affect?
- Troubleshooting: What has changed?

Am I safe?

- Properly configured resources are critical to security

- Config enables you to continuously monitor the configurations of your resources and evaluate these configurations for potential security weaknesses

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Where is the evidence?

- Many compliance audits require access to the state of your systems at arbitrary times (i.e. PCI, HIPAA)

- A complete inventory of all resources and their configuration attributes is available for any point in time

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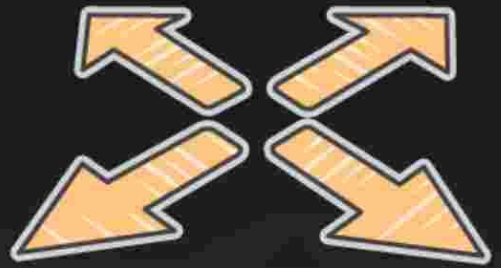
What will this change affect?

- When your resources are created, updated, or deleted, these configuration changes are streamed to Amazon SNS

- Relationships between resources are understood, so that you can proactively assess change impact



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SECURITY PROVIDES CONTROL

First class security and compliance starts (but doesn't end!) with encryption

Automatic encryption with managed keys

Bring your own keys

Dedicated hardware security modules

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Encryption & Best Practices with AWS

Managed key encryption

Key storage with AWS CloudHSM

Customer-supplied key encryption

DIY on Amazon EC2

Create, store, & retrieve keys securely

Rotate keys regularly

Securely audit access to keys

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AWS Key Management Service

- A managed service that makes it easy for you to create, control, and use your encryption keys
- Integrated with AWS SDKs and AWS services including Amazon EBS, Amazon S3, and Amazon Redshift
- Integrated with AWS CloudTrail to provide auditable logs to help your regulatory and compliance activities

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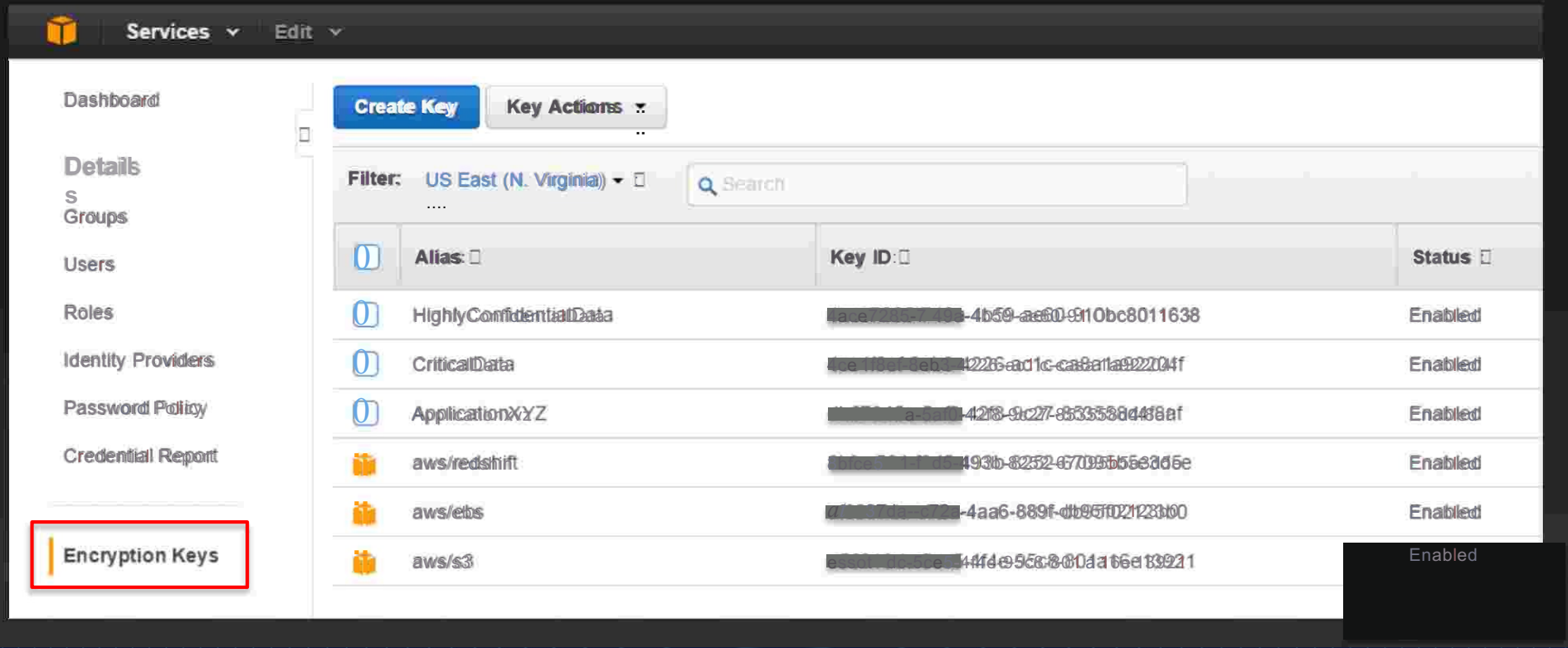
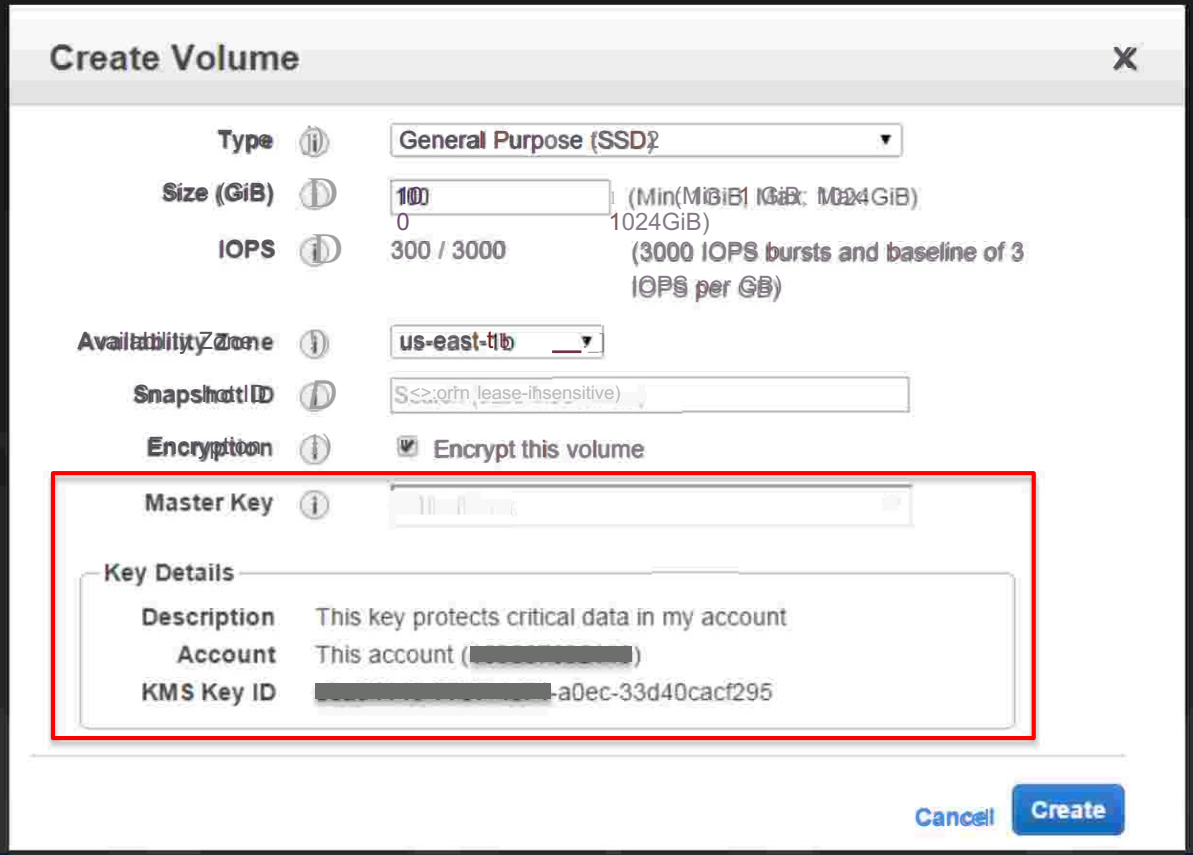
AWS Key Management Service

Integrated with AWS IAM Console



AWS Key Management Service

Integrated with Amazon EBS



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SECURITY IS AGILE

Everyone’s an owner

When the problem is “mine” rather than “hers” there’s a much higher likelihood I’ll do the right thing

Preferred Culture:

Measure constantly, report regularly, and hold senior executives accountable for security – have them drive the right culture

Culture:

Apply more effort to the “why” rather than the “how”

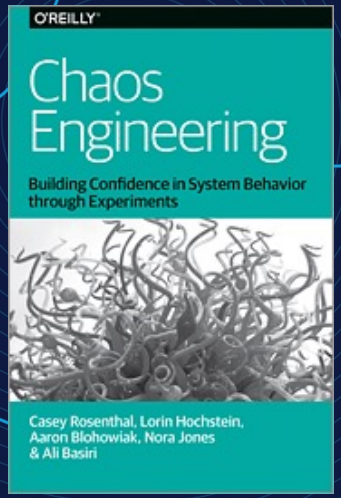
Why is what really matters

When something goes wrong, ask the “five whys”

Culture:

Test, CONSTANTLY

- Inside/outside
- Privileged/unprivileged
- Black-box/white-box
- Vendor/self



"Not what happens ***IF*** it fails,
but what happens ***WHEN*** it fails."

—Nora Jones, Author, and Sr. Chaos Engineer at Netflix

Review your solution today!

cloud@brainstation-23.com

Thank you!

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