
AWS
re:Invent

MGT291-L

Speed up innovation with cloud management and governance

Bill Vass

Vice President of Engineering

AWS

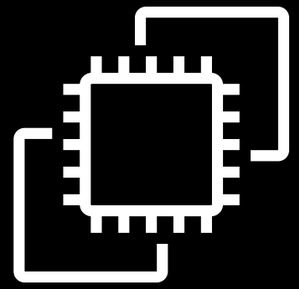
AWS re:Invent

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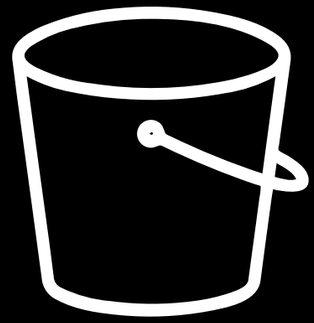
Freedom and innovation in the cloud



AWS account



Some compute power



Some storage

Software-defined infrastructure, built to scale

As developers scale up their application development and management:



Provision & orchestrate



Monitor & observe



Centralize operations



AWS
CloudFormation

Deploy



Amazon
CloudWatch

Monitor, log, alarm,
and set up synthetics



AWS
X-Ray

Debug and tune



AWS Systems
Manager

Manage instances

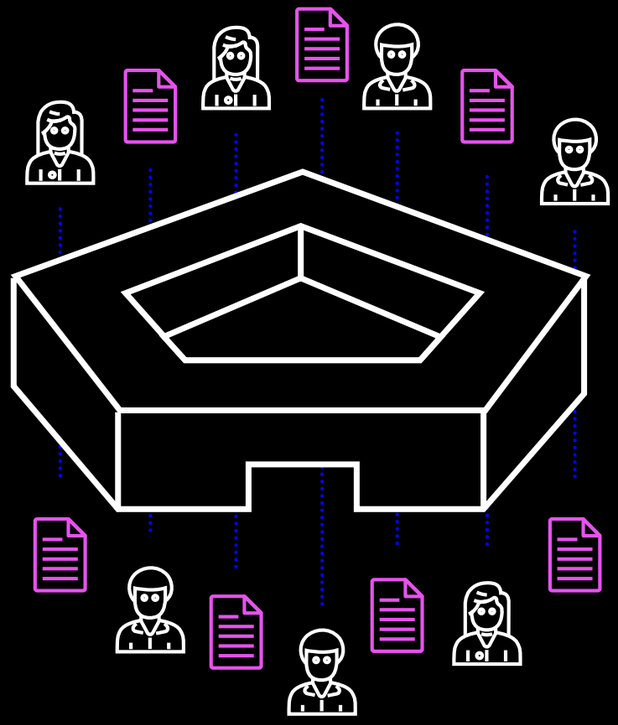
For large organizations, automation is key

CIOs who have thousands of applications in their portfolios have different priorities:

Set up governance

Enable compliance

AWS Cloud provides the tools to help you automate & scale



- Compliance
- Reliability
- Resiliency
- Durability
- Security

AWS offers a set of services that can help you automate the management of application performance, availability, and governance at scale


AWS CloudFormation


Amazon CloudWatch

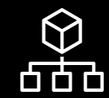

AWS Systems Manager


AWS CloudTrail


AWS Config


AWS Service Catalog


AWS Control Tower


AWS Organizations


AWS Audit Manager


AWS Marketplace


AWS Budgets


AWS Cost & Usage Report


AWS Cost Explorer


AWS X-Ray


AWS License Manager


AWS Well-Architected Tool

Quick stats: Ops management for 1+ million active customers every week



Amazon CloudWatch

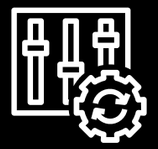
1 quadrillion (1,000 trillion)
metric observations per month

. . . that's 386 million a second



AWS Systems Manager

>10 million
Windows and Linux instances managed per week



AWS Config

2 billion
Config checks each month

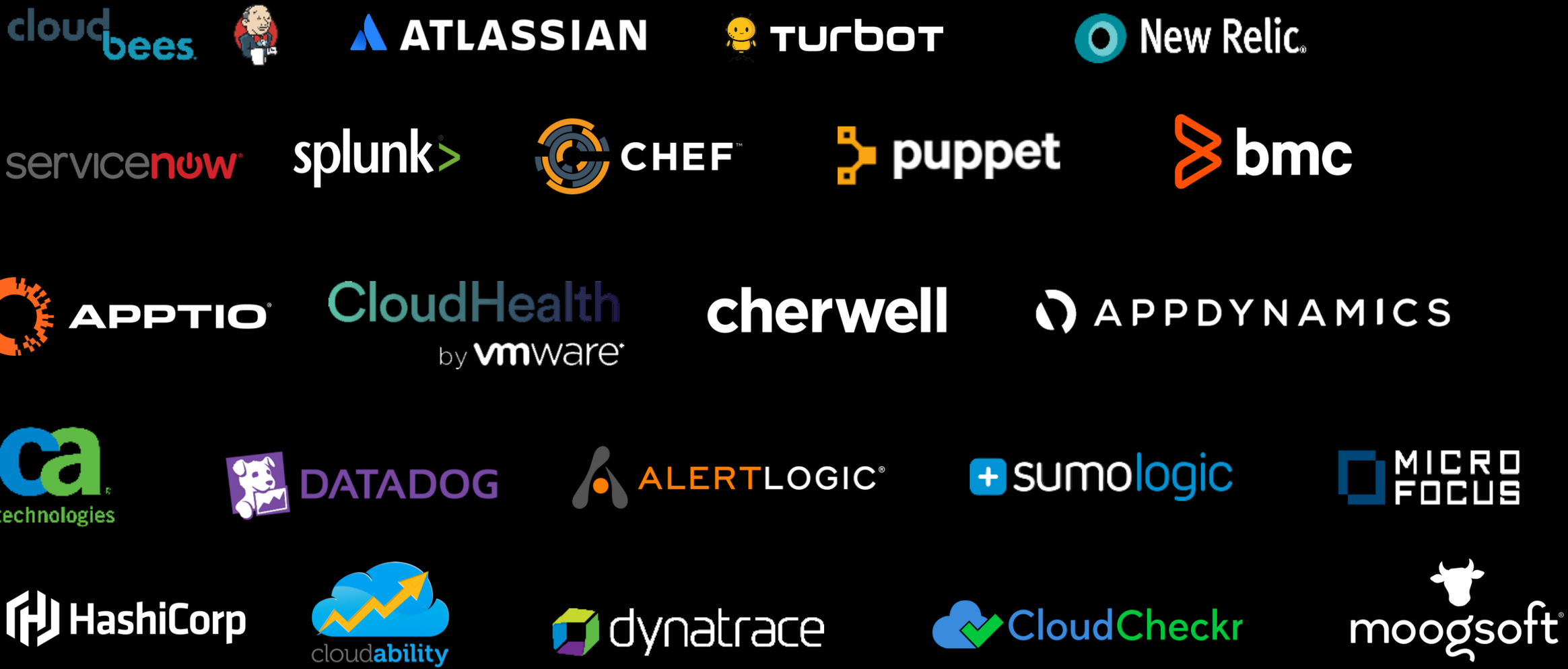


AWS CloudTrail

500 billion
Auditing API events per day

https://aws.amazon.com/products/management-and-governance/

Extensive technology partner ecosystem



Note that this grouping is not comprehensive but is meant to represent only a selection of these AWS Partners

Use cases

Set up governance | Enable compliance | Provision & orchestrate | Monitor & observe | Centralize operations



AWS Control Tower



AWS Organizations



AWS Security Hub



Amazon GuardDuty

AWS Control Tower

Set up automated governance and a new, secure multi-account AWS environment

AWS Organizations

Centrally manage and govern your environment as you scale your AWS resources

AWS Security Hub

Centrally view and automatically manage security alerts and automate security checks

Amazon GuardDuty

Automate intelligent threat detection and continuous monitoring to protect your AWS accounts, workloads, and data

Use cases

Set up governance | **Enable compliance** | Provision & orchestrate | Monitor & observe | Centralize operations



AWS CloudTrail



AWS Config



AWS Audit Manager

AWS CloudTrail

Track every user action and API usage and retain an event history of account activity

AWS Config

Discover your AWS resources and configurations, then automatically evaluate them

AWS Audit Manager NEW!

Continuously audit your AWS usage to simplify how you assess risk and compliance

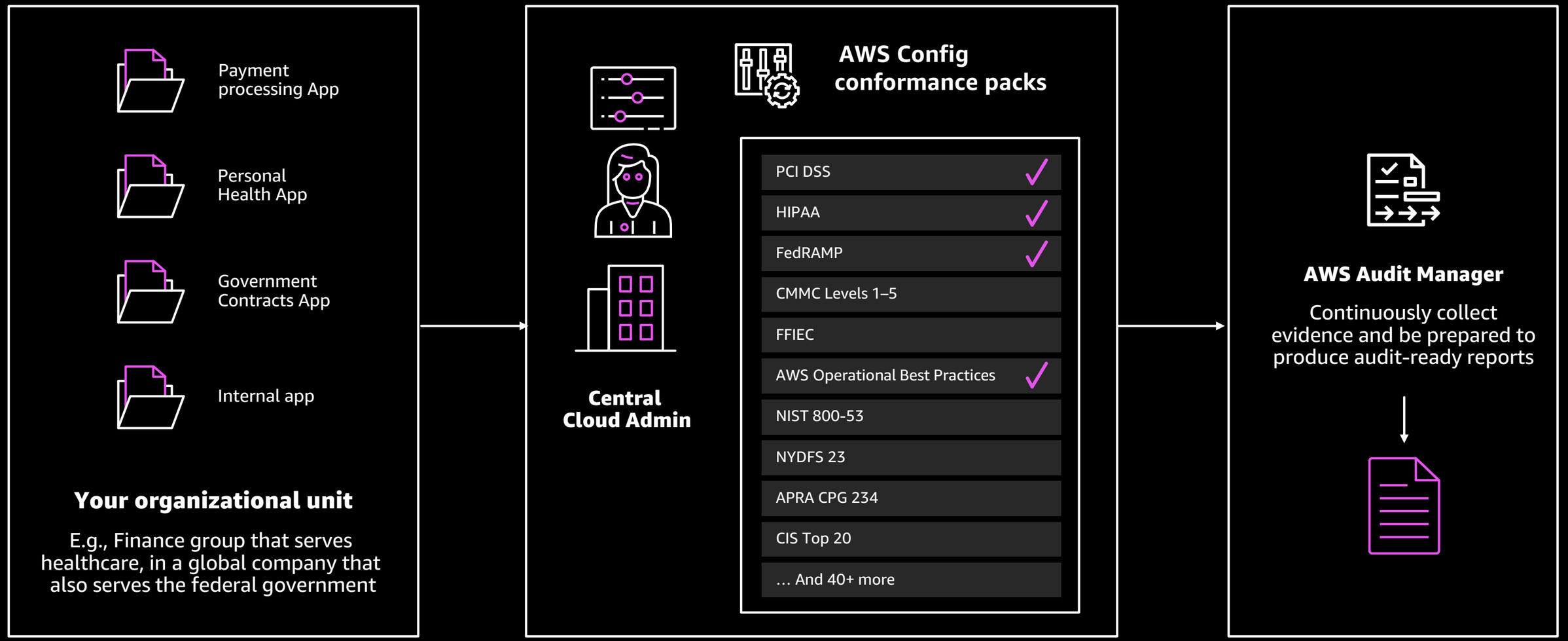
RECENT RELEASE

50 sample templates for AWS Config conformance packs

- Package multiple compliance rules and remediation actions into a single conformance pack
- Sample templates help you quickly create conformance packs aligned to AWS best practices and regulatory standards like FedRAMP, HIPAA, and PCI DSS

AWS Config conformance packs

CHOOSE FROM 50+ COMPLIANCE REGIMES





Roshan Vilat

Commonwealth Bank of Australia

Head of Product – Cloud

Background

- Australia's **largest bank**
- Main financial institution for **1 in 3 Australians**
- **Best in digital** – #1 for online and mobile banking in Australia, 7 million active customers
- AWS customer since 2012
- Accelerating our cloud journey – **95% in public cloud** in 5–7 years



“I want a rich array of cloud-native services, and I’m going to skill up my DevOps team to build and run them ourselves.”

Dom Ziino

GM, Digital Operations
and Technology
Commonwealth Bank of Australia



AWS re:Invent

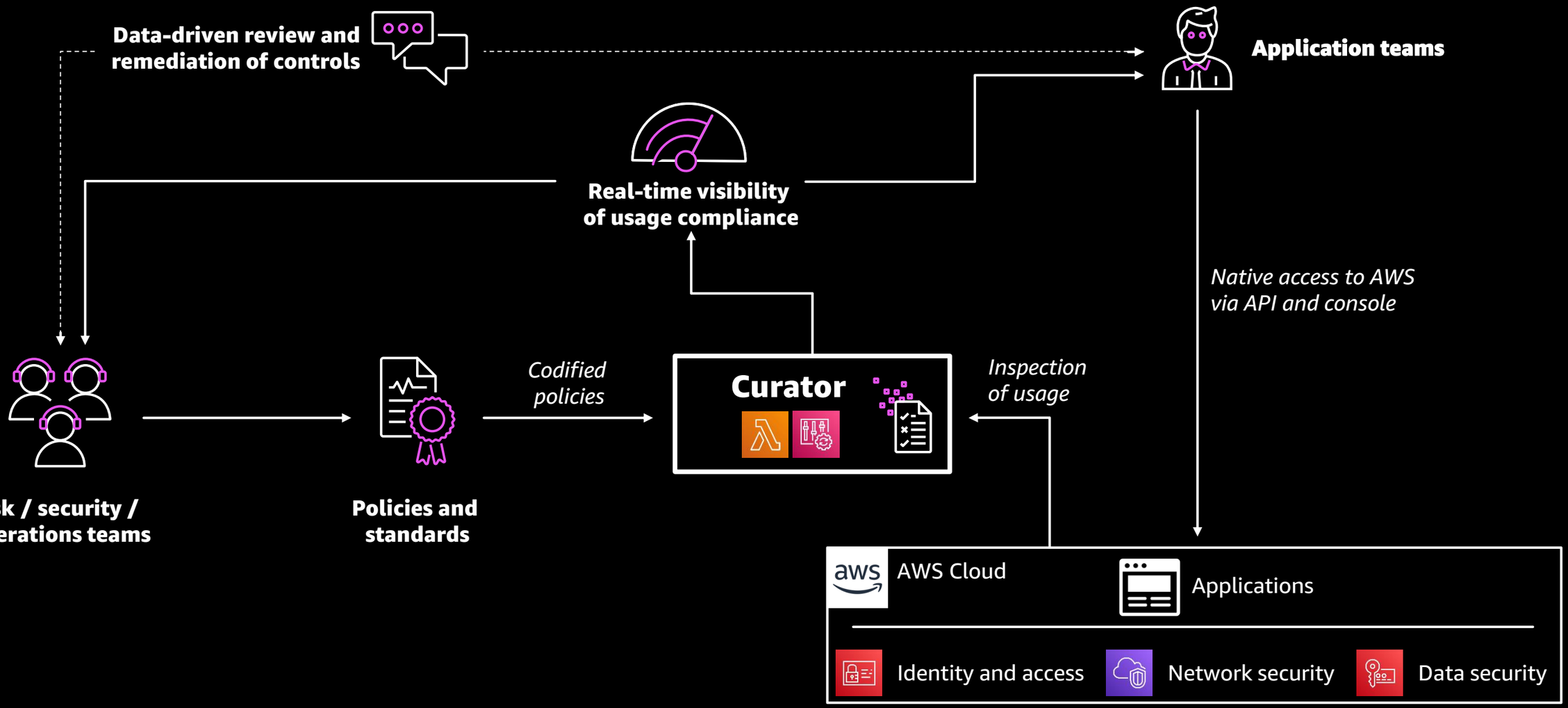
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How can IT support business agility?



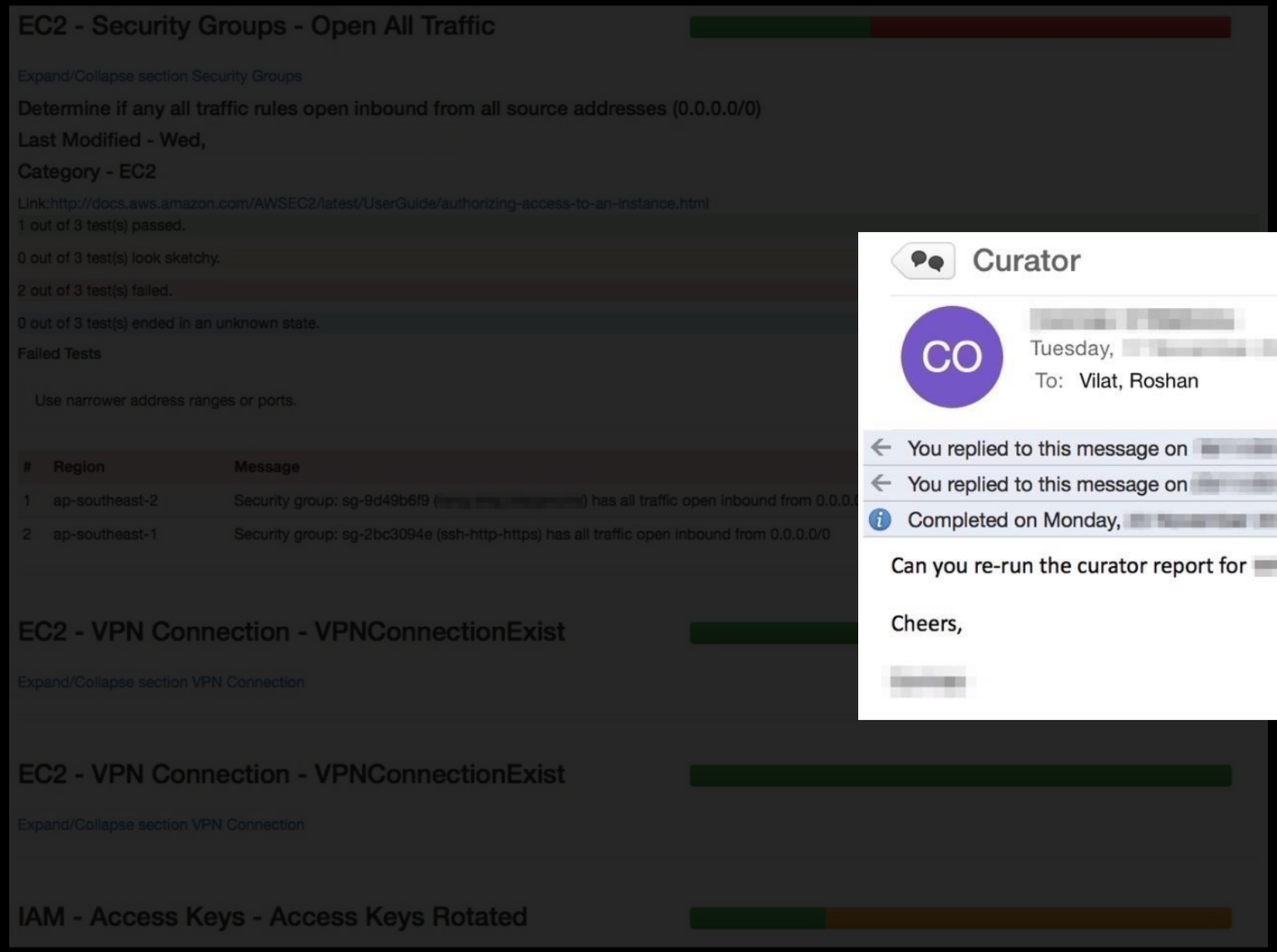
Enabling developers safely

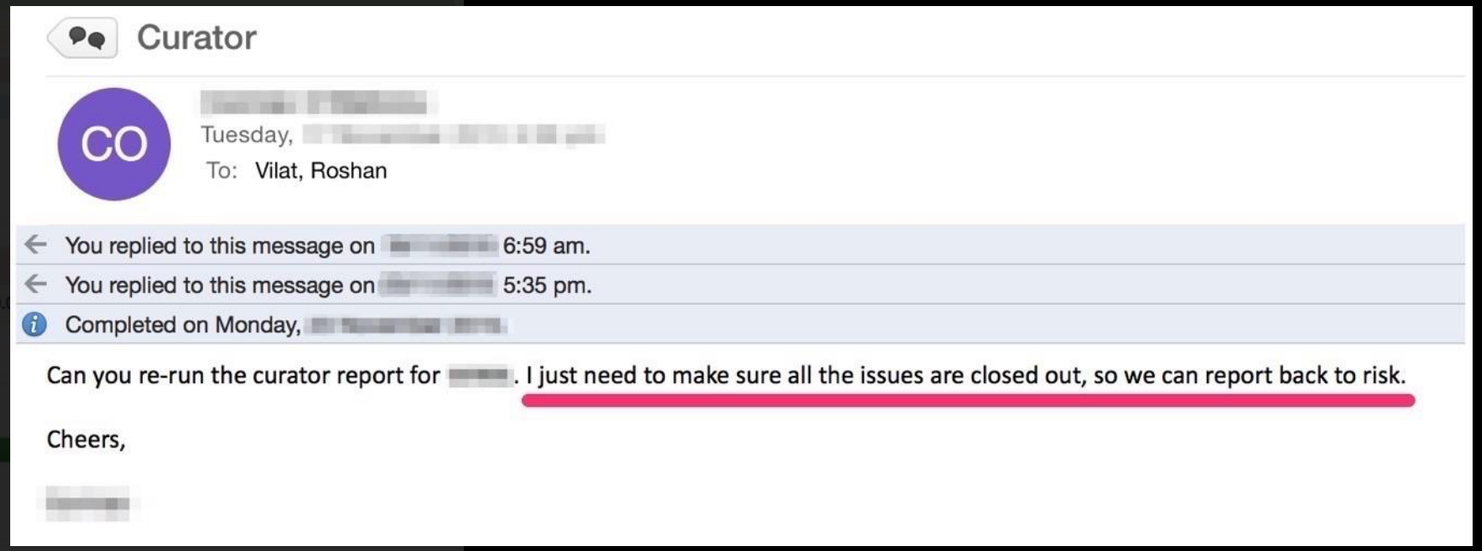
CURATOR



Visibility driving accountability

CURATOR





“The best way to show that a stick is crooked is not to argue about it or to spend time denouncing it, but to lay a straight stick alongside it.”

D. L. Moody

American evangelist and publisher



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Evolving to compliance at scale



Minimize friction by using out-of-band governance

Balance preventative, detective, and corrective governance mechanisms using AWS management and governance services



Automate remedial actions to maintain compliance

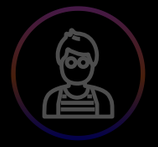
Use AWS Systems Manager to remediate noncompliant controls with minimal effort



Scale governance mechanisms to accelerate adoption

Automate cloud usage compliance and control assurance at scale using AWS Config and conformance packs

Use cases


Set up governance


Enable compliance


Provision & orchestrate


Monitor & observe


Centralize operations


AWS CloudFormation


AWS Service Catalog


AWS Marketplace


AWS Proton

AWS CloudFormation

Use infrastructure as code to model and automate provisioning of AWS and third-party resources

AWS Service Catalog

Enable self-service provisioning with automated governance

AWS Marketplace

Discover, procure, entitle, and launch 8,000 third-party products

AWS Proton NEW! (PREVIEW)

Fully managed deployment service for container and serverless applications, which ties together all aspects of modern application deployments into one seamless, consistent workflow

RECENT RELEASE

AWS CloudFormation Modules

Modules are reusable building blocks that capture common solutions and prescriptive best practices, so you can compose your applications more easily and quickly

Use cases

Set up governance | Enable compliance | Provision & orchestrate | **Monitor & observe** | Centralize operations



Amazon CloudWatch



AWS X-Ray

Amazon CloudWatch

Enable observability of your AWS resources and applications on AWS and on-premises with an end-to-end view of applications

AWS X-Ray

Analyze and debug distributed applications in production and development

RECENT RELEASE

Amazon CloudWatch Lambda Insights

- Easily collect and aggregate curated metrics and logs from AWS Lambda functions
- Collect compute performance metrics from each Lambda function as performance events
- Automatically generate custom metrics for monitoring and alarming

New visualizations capabilities in CloudWatch

New visualization widgets and tag-based monitoring so you can visualize operational health and performance metrics by tag

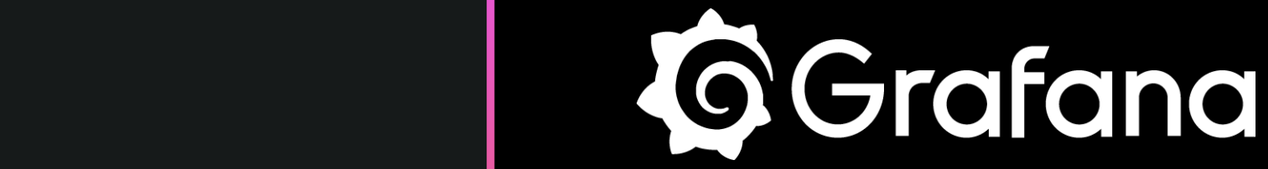


Mark Carter

AWS

General Manager of Observability

Working with the open source community













OpenTelemetry

















INTRODUCING

AVAILABLE NOW

AWS Distro for OpenTelemetry

A SECURE, PRODUCTION-READY, OPEN-SOURCE DISTRIBUTION SUPPORTED BY AWS



Vendor-agnostic metric, trace, and log instrumentation for applications and infrastructure

Backed by AWS security, performance, and support

Support for AWS and partner observability services

LEARN MORE | Session OPN301 – Open source observability at AWS

INTRODUCING

IN PREVIEW TODAY

Amazon Managed Service for Prometheus

HIGHLY AVAILABLE, SECURE, AND MANAGED MONITORING AND ALERTING FOR CONTAINERS



Ingest, query, and store Prometheus metrics at scale, easily and securely

Monitor containers on AWS and on-premises

Get started quickly monitoring EKS and ECS

LEARN MORE | Session – Introducing Amazon Managed Service for Prometheus

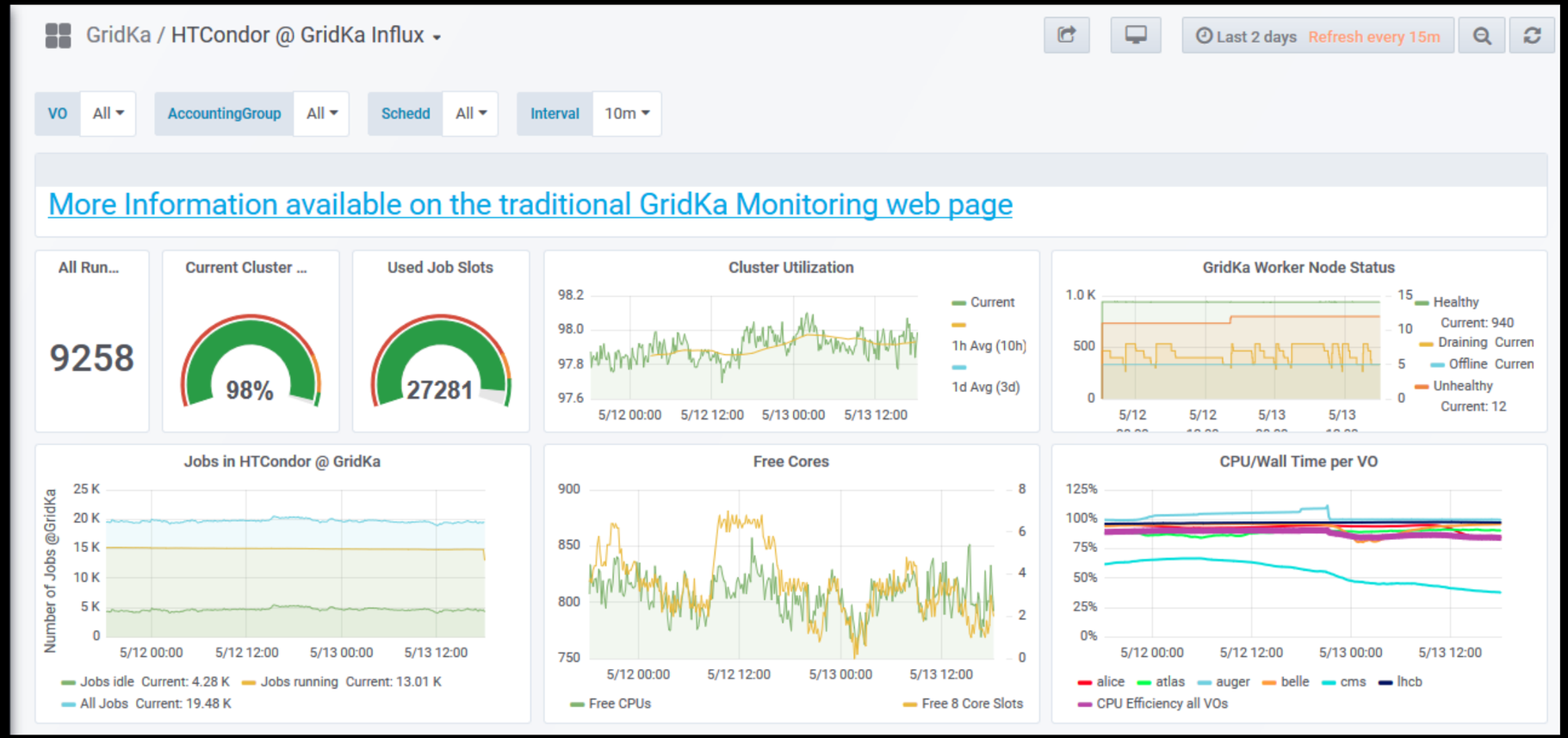


Tim Mower

Yelp

Site Reliability Engineer

Grafana brings data from multiple sources into a single tool



Data visualization tool for logs, metrics, and traces

Support for 50+ data source plugins

Easily share & collaborate in real time using dashboards

INTRODUCING

IN PREVIEW TODAY

Amazon Managed Service for Grafana

POWERFUL, INTERACTIVE DATA VISUALIZATIONS FOR BUILDERS, OPERATORS, AND BUSINESS LEADERS



Run Grafana at scale, easily and securely

Visualize, analyze, and correlate metrics, logs, traces, and IoT data securely across multiple data sources

Upgrade to Grafana Enterprise to connect to 3rd party ISVs such as Datadog and Splunk

LEARN MORE | Session – Introducing Amazon Managed Service for Grafana

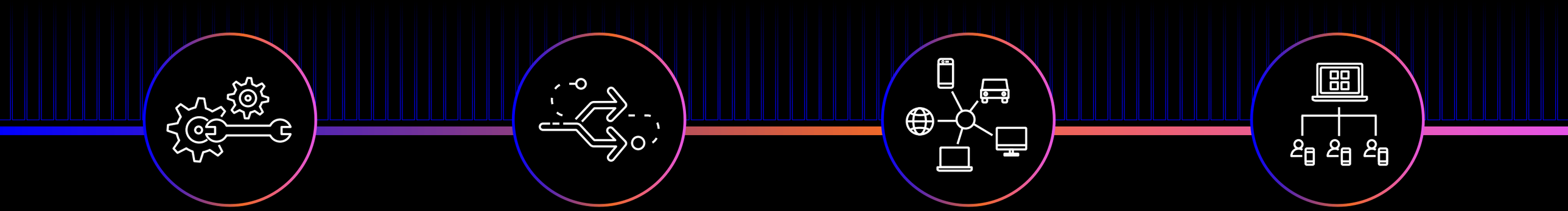
Amazon Managed Services for Prometheus and Grafana

DEMO VIDEO

AWS re:Invent

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Modern apps require “modern ops”



Built for modern architectures

Connects with third-party solutions

Manages at massive scale

Supports open source innovation

Use cases

Set up governance

Enable compliance

Provision & orchestrate

Monitor & observe

Centralize operations



AWS Systems Manager



OPERATIONS MANAGEMENT

View operational insights and proactively resolve issues



ACTIONS AND CHANGE

Automate actions with runbooks



NODE MANAGEMENT

Securely manage instances and desired state configuration



APPLICATION MANAGEMENT

Manage applications with contextual data

Modern apps require “modern ops”

HIGHLY SCALABLE 10M+ instances managed each week

DISTRIBUTED & AUTOMATED across multiple accounts & Regions

AWS & ON-PREMISES with Windows and Linux support

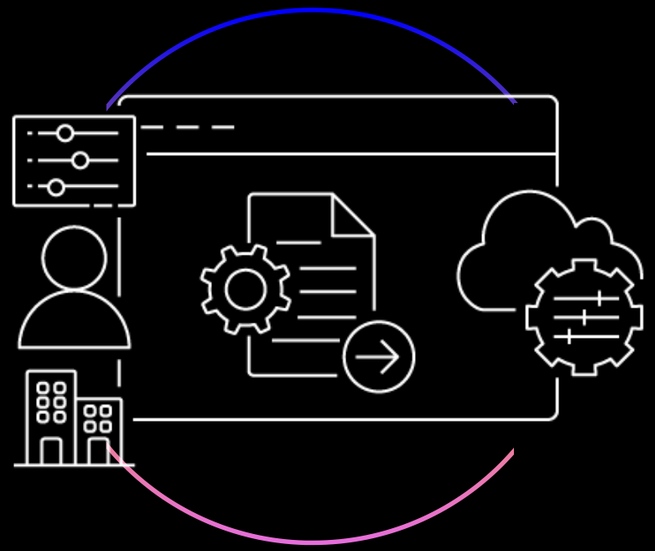
OPEN with agent open-sourced on GitHub

INTRODUCING

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AWS Systems Manager – Change Manager

CHANGE MANAGEMENT FOR AWS AND ON-PREMISES

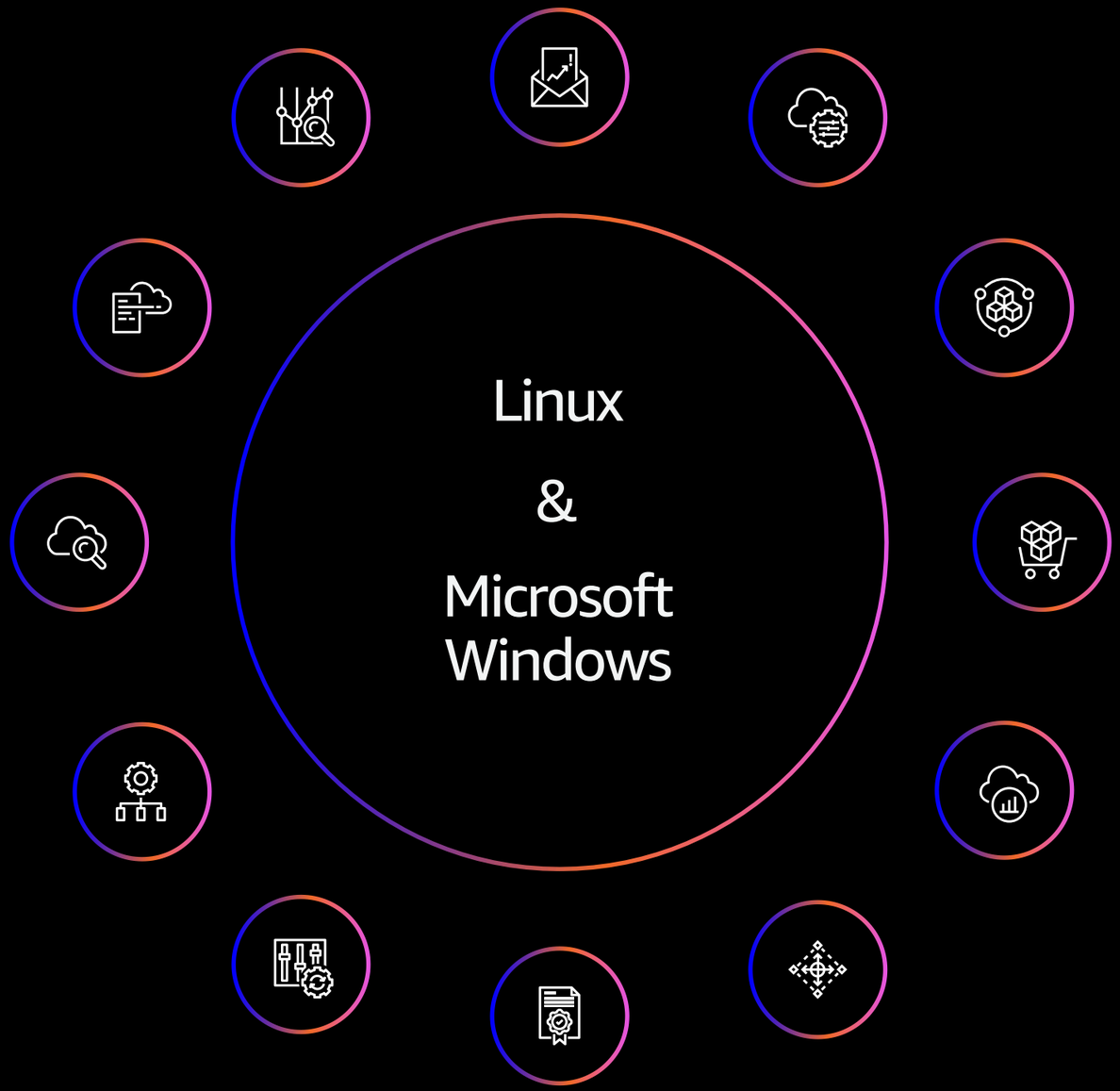


Make operational changes with best practices and safety

Automate approval processes with preapproved workflows

Centrally audit operational changes across your organization

LEARN MORE | Session MGT401 – Automate anything with AWS Systems Manager



Ops tasks often require traditional Windows admins to also know Linux

INTRODUCING

AVAILABLE TODAY

AWS Systems Manager – Fleet Manager

CONSISTENT ADMINISTRATION ACROSS WINDOWS AND LINUX SERVERS



Manage and troubleshoot your Windows and Linux servers running on AWS and on-premises

Administer VM fleet without needing to remotely connect with RDP or SSH

Perform common administrator tasks from a single integrated console

LEARN MORE | Session MGT401 – Automate anything with AWS Systems Manager

How can I simplify management and governance of my applications?

ANNOUNCING

AWS Service Catalog – AppRegistry
&
AWS Systems Manager – Application Manager

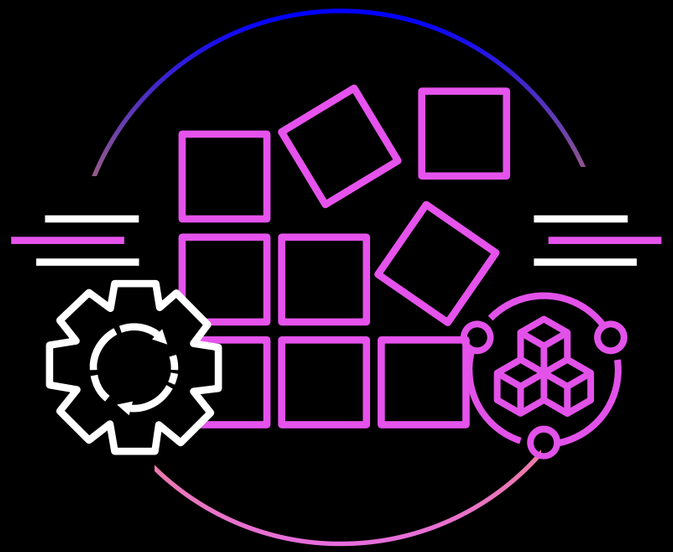
SIMPLIFYING APPLICATION MANAGEMENT WITH AWS

INTRODUCING

NOW AVAILABLE

AWS Service Catalog – AppRegistry

DEFINE AND MANAGE APPLICATIONS AND METADATA



Create application definitions that define resources, metadata, AWS services, and ISV partners

Maintain a single source of truth by integrating AppRegistry with your application development processes

Get application context so that you know what resources are associated with your application

LEARN MORE | Session MGT302 – Gaining application-level governance and cost visibility

INTRODUCING

AVAILABLE TODAY

AWS Systems Manager – Application Manager

MANAGE APPLICATIONS, NOT JUST INDIVIDUAL RESOURCES



Discover your application's components and resources across multiple AWS services

View operational data for your application such as alarms and logs that are aggregated from services like Amazon CloudWatch, AWS CloudTrail, and OpsCenter

Take action in the context of your application to remediate using automation runbooks

LEARN MORE | Session MGT401 – Automate anything with AWS Systems Manager

Automation to simplify management and governance at scale

Set up governance

Enable compliance

Provision & orchestrate

Monitor & observe

Centralize operations



AWS CloudFormation



NEW!
AWS Audit Manager



NEW!
AWS Proton



NEW!
AWS Distro for OpenTelemetry



NEW!
Amazon Managed Service for Prometheus



NEW!
Amazon Managed Service for Grafana



AWS Cost and Usage Report



AWS Systems Manager



AWS Service Catalog



AWS Control Tower



AWS Marketplace



Amazon CloudWatch



AWS X-Ray



AWS Cost Explorer



AWS CloudTrail



AWS Config



AWS License Manager



AWS Budgets



AWS Well-Architected Tool



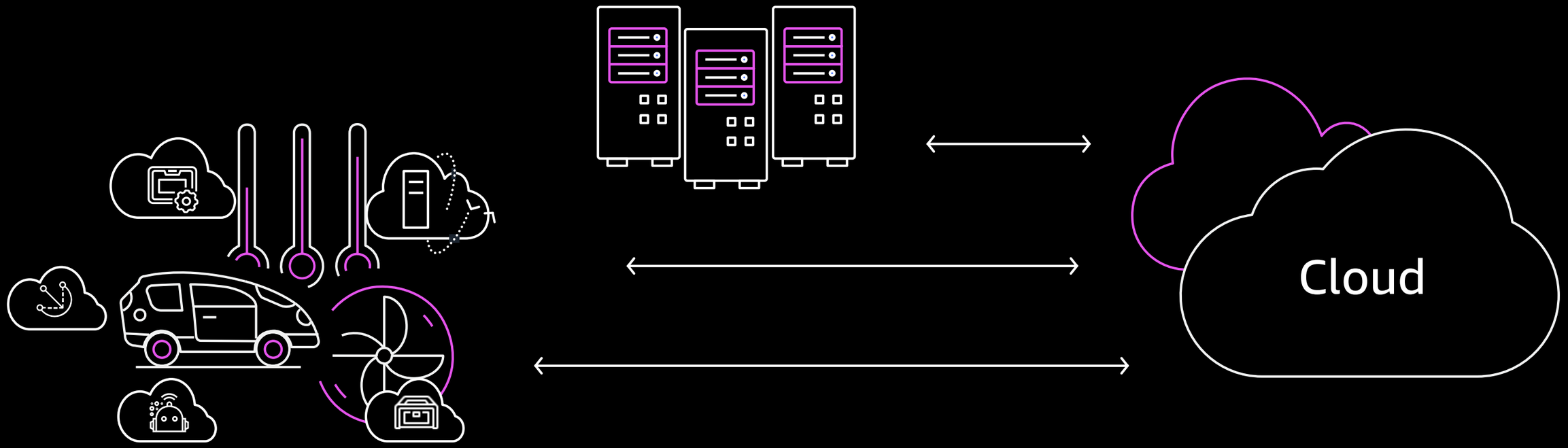
AWS Organizations



AWS Managed Services

Automation to simplify management and governance at scale

AT THE EDGE, ON-PREMISES, AND IN THE CLOUD



End-to-end development, deployment, management, security, and governance

Automate centralized control over decentralized execution

Key takeaways

01 “Application-aware” management

AWS offers capabilities to help simplify application management and governance

02 Observability is key

New AWS services provide visibility into the behavior of distributed applications

03 Modern apps need modern ops

You can operate with greater safety, ease, and efficiency with AWS Systems Manager

Next steps

01

Join the sessions

Watch sessions listed in the re:Invent track for Management Tools & Governance

02

Browse the blog

Follow the latest news and how-to articles on the AWS Management & Governance Blog

03

Talk to an AWS account rep

Understand and assess how AWS can help you achieve your goals

Thank you!



AWS re:Invent

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Please complete the session survey

AWS re:Invent

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