AWS re:Invent

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COP308

Cloud operations on AWS

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Agenda

Cloud operating model

Modern ops

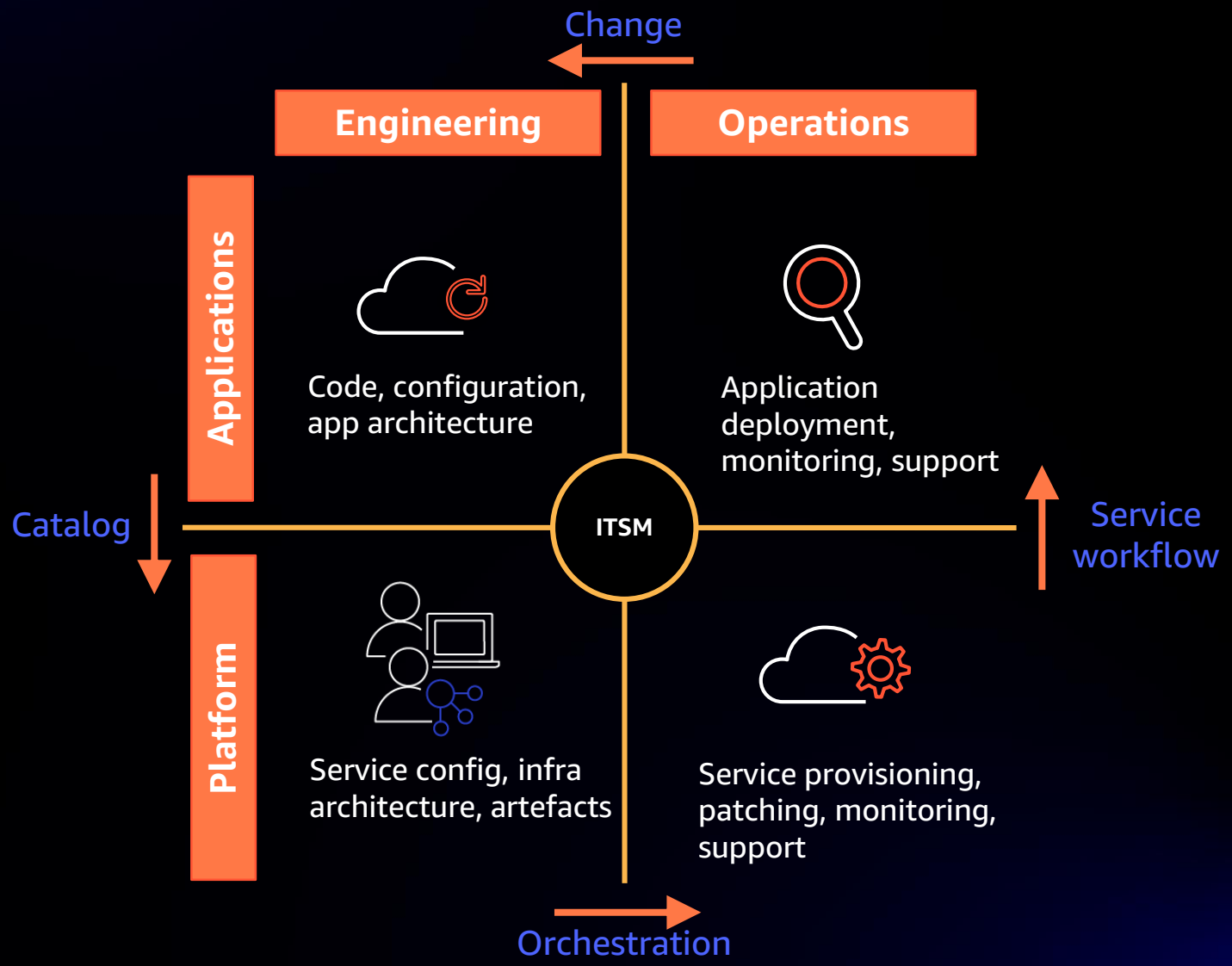
Centralized IT operations

Application-level abstraction

Compliance management

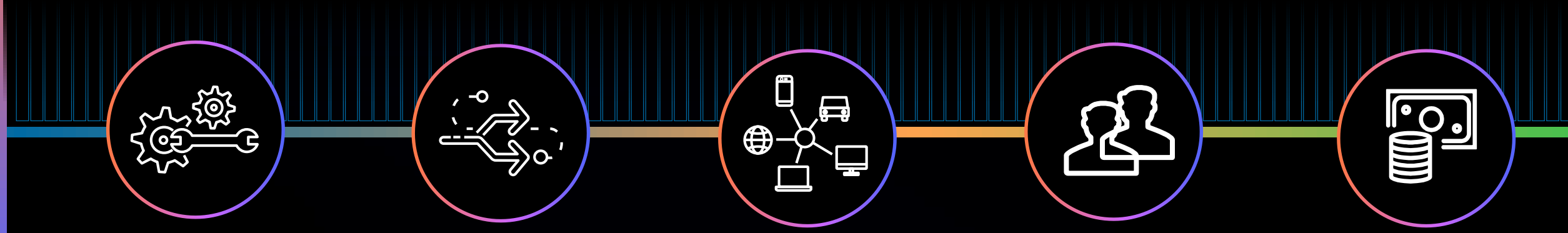
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Cloud operating model activities



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Cloud operating model: Why is it important?



Accelerate cloud adoption and modern application development

Reduce human errors and intervention

Manage at scale

Encourage DevOps culture

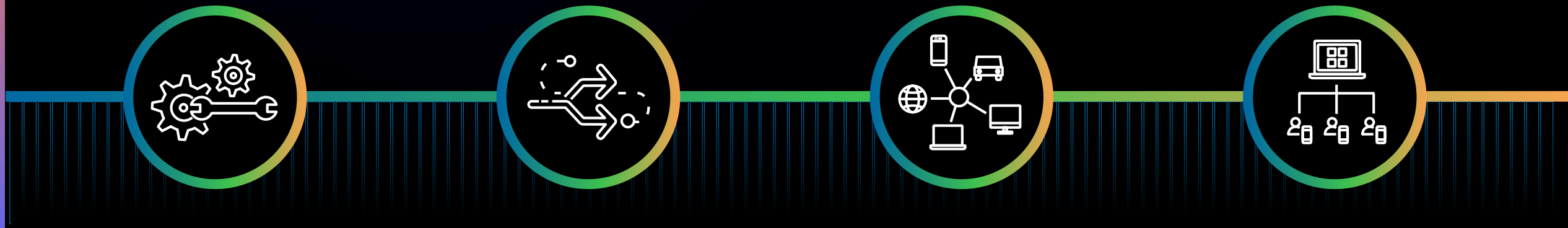
Manage cost

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How can I simplify management and governance of my applications?

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Modern apps require “modern ops”



Built for modern architectures

Connects with third-party solutions

Manages at scale

Supports open source innovation

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



Amazon CloudWatch

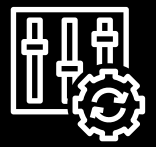
4 quadrillion (4,000 trillion)
Metric observations per month

. . . that's 1.5 billion a second



AWS Systems Manager

>10 million
Windows and Linux instances managed per week



AWS Config

5 billion
Config checks each month



AWS CloudTrail

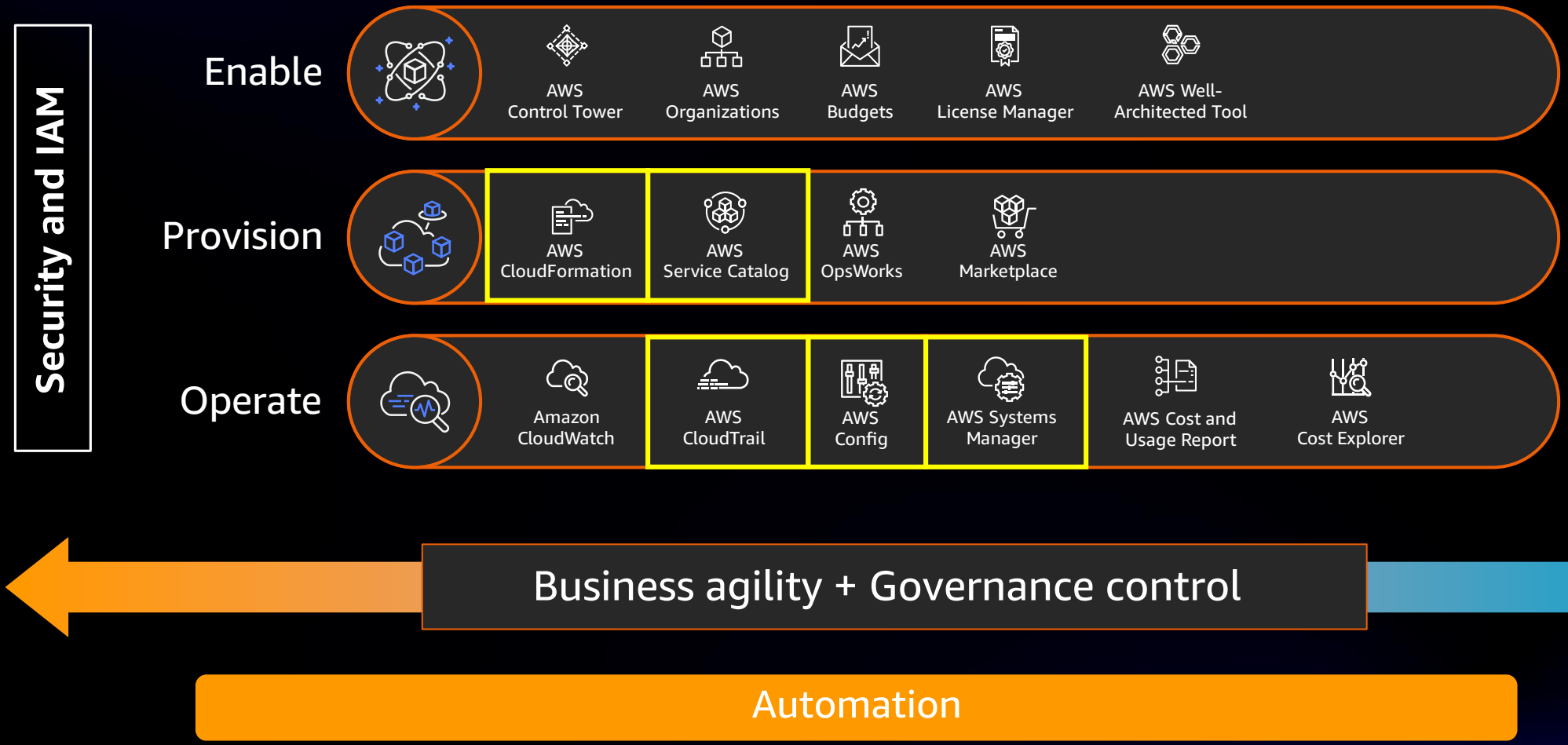
500 billion
Auditing application programming interface (API) events per day

aws

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

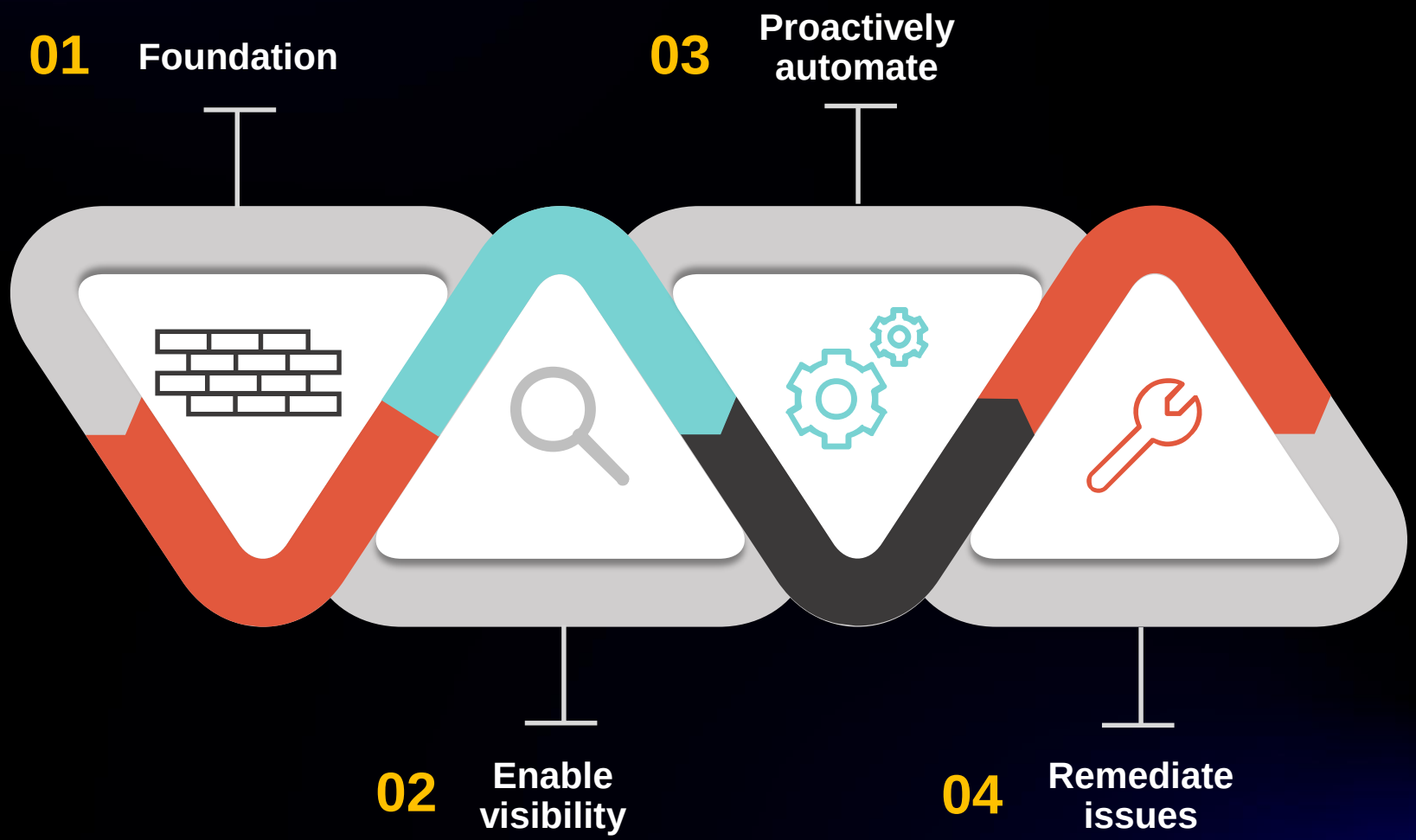
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AWS management and governance services



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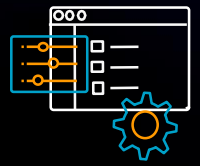
Centralized IT operations with AWS Systems Manager



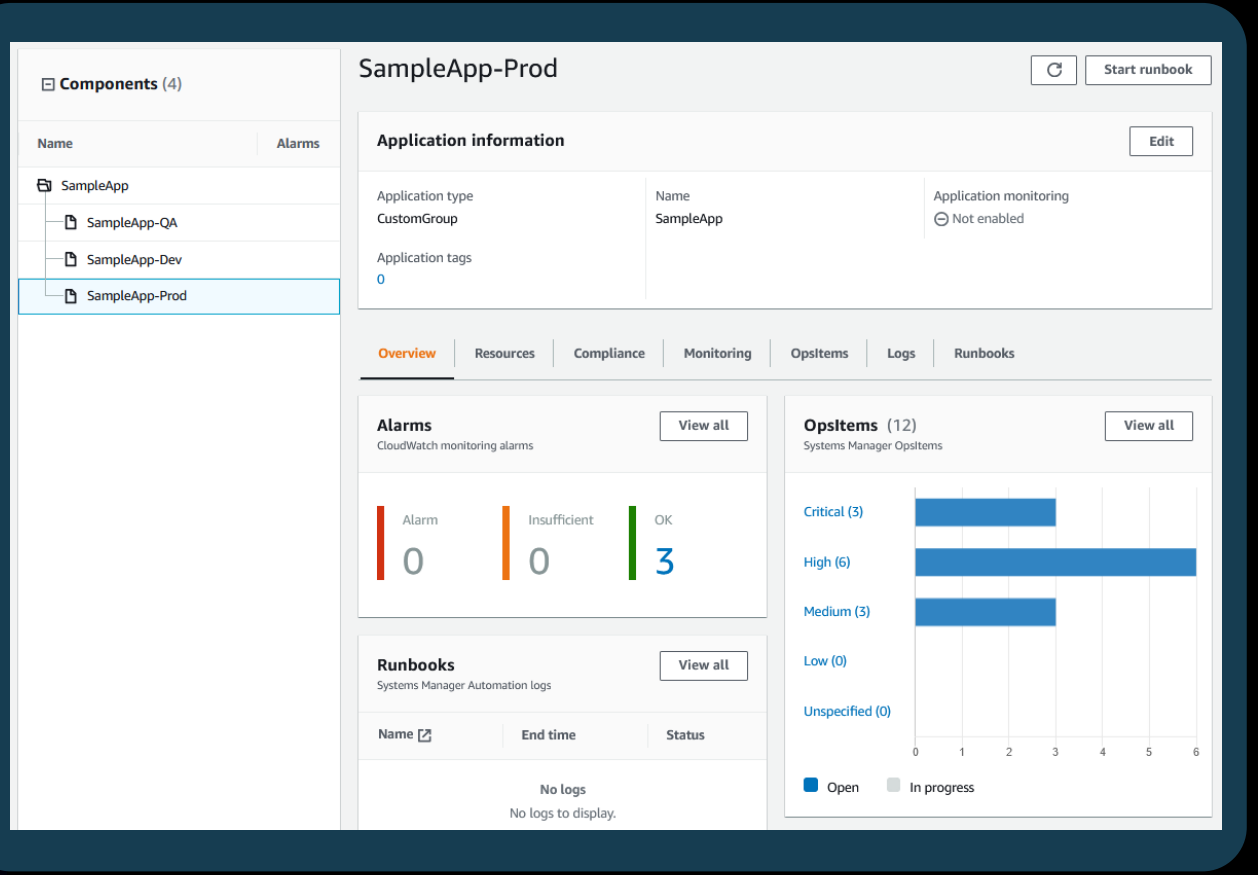
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Application manager

MANAGE APPLICATIONS, NOT JUST INDIVIDUAL RESOURCES



- Discover application components and resources
- Across multiple AWS services like CloudFormation stacks, Resource Groups, Launch Wizard, Service Catalog AppRegistry, and Amazon EKS and ECS clusters
- View operational data for applications
- See alarms, logs, and issues from services like Amazon CloudWatch, AWS CloudTrail, and OpsCenter
- Take actions in the context of applications
- Remediate using automation runbooks



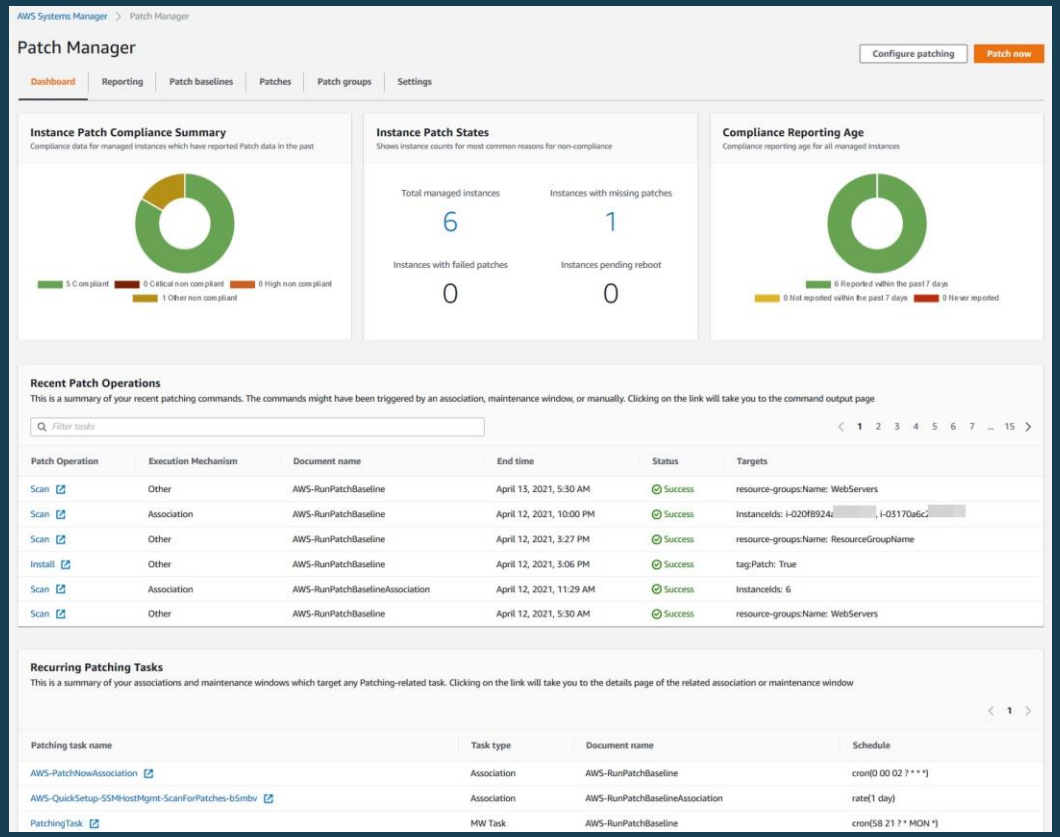
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Patch manager

AUTOMATE THE PROCESS OF PATCHING YOUR INSTANCES



- Automate patching by defining rules for auto approval
- Scan and install patches on a regular basis by scheduling maintenance windows
- Shorten the time to install zero-day vulnerability patches
- View aggregate patch compliance using Explorer
- Orchestrate multi-step, custom patch processes using patch lifecycle hooks



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AWS Service Catalog AppRegistry

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The need for an application-level abstraction

- A way to collect all application resources
- Need to associate data to provide a holistic view

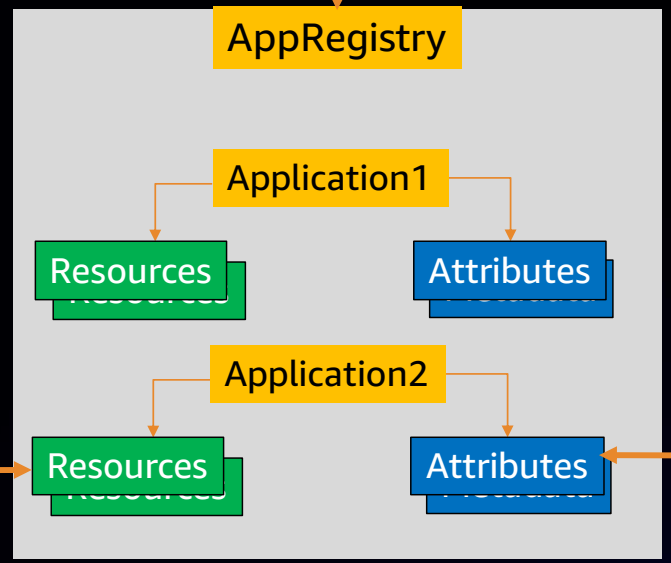
- Out of all resources in my environment, which one belongs to application A?
- How do I know if this Amazon EC2 instance is part of a production workload?
- If I perform an operation (e.g., patch), which workloads are impacted?

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AppRegistry: Associate your stacks and extensible metadata to an application object

Application
A new application object to which you associate your application resources (AWS CloudFormation Stacks)

AWS Service Catalog
Define your applications



Resources
Application resource collections (e.g., an AWS CloudFormation Stack)

Stack(s)

Associate

Attribute groups
JSON file(s) containing application metadata

Associate

JSON file(s)

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How can I simplify compliance management of my applications?

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Manage risk

AUTOMATE COMPLIANCE MANAGEMENT



Configuration change occurs in your AWS resources

AWS Config

AWS Config records and normalizes the changes into a consistent format



AWS Config automatically evaluates the recorded configurations against the configurations you specify

AWS Config APIs & Console

Amazon SNS

Amazon CloudWatch

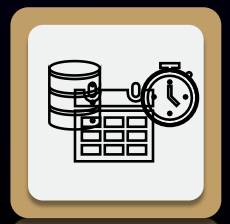
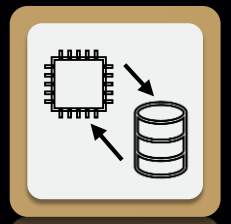
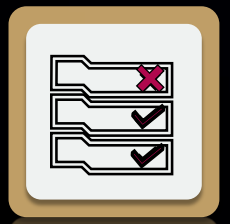
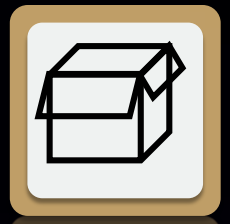
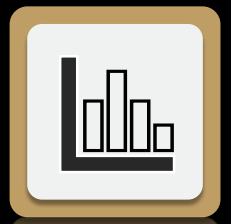
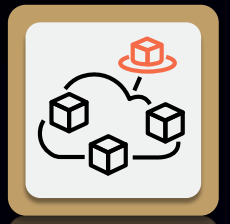
Amazon S3

Access change history and compliance results using the console or APIs; CloudWatch Events or SNS alert you when changes occur; deliver change history and snapshot files to your Amazon S3 bucket for analysis

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AWS Config

RECORD AND EVALUATE CONFIGURATIONS OF YOUR AWS RESOURCES

Record	 Resource configuration history	 Resource relationship tracking	 Software configuration history
Evaluate	 Configurable and customizable rules	 Conformance packs	 Automatic remediation
Visualize	 Cloud governance dashboard	 Multi-account, multi-region data aggregation	 Configuration snapshots

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Workshop

https://dashboard.eventengine.run/

Event Hash:
2c22-1e85aed2e4-79



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Thank you!

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