



AWS
re:Invent

MGT 312

Operational automation: Set it and forget it

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Agenda

Intro to workshop

Brief intro to services used in the workshop

Hands-on labs

Wrap-up

Running a race – speed & efficiency is key



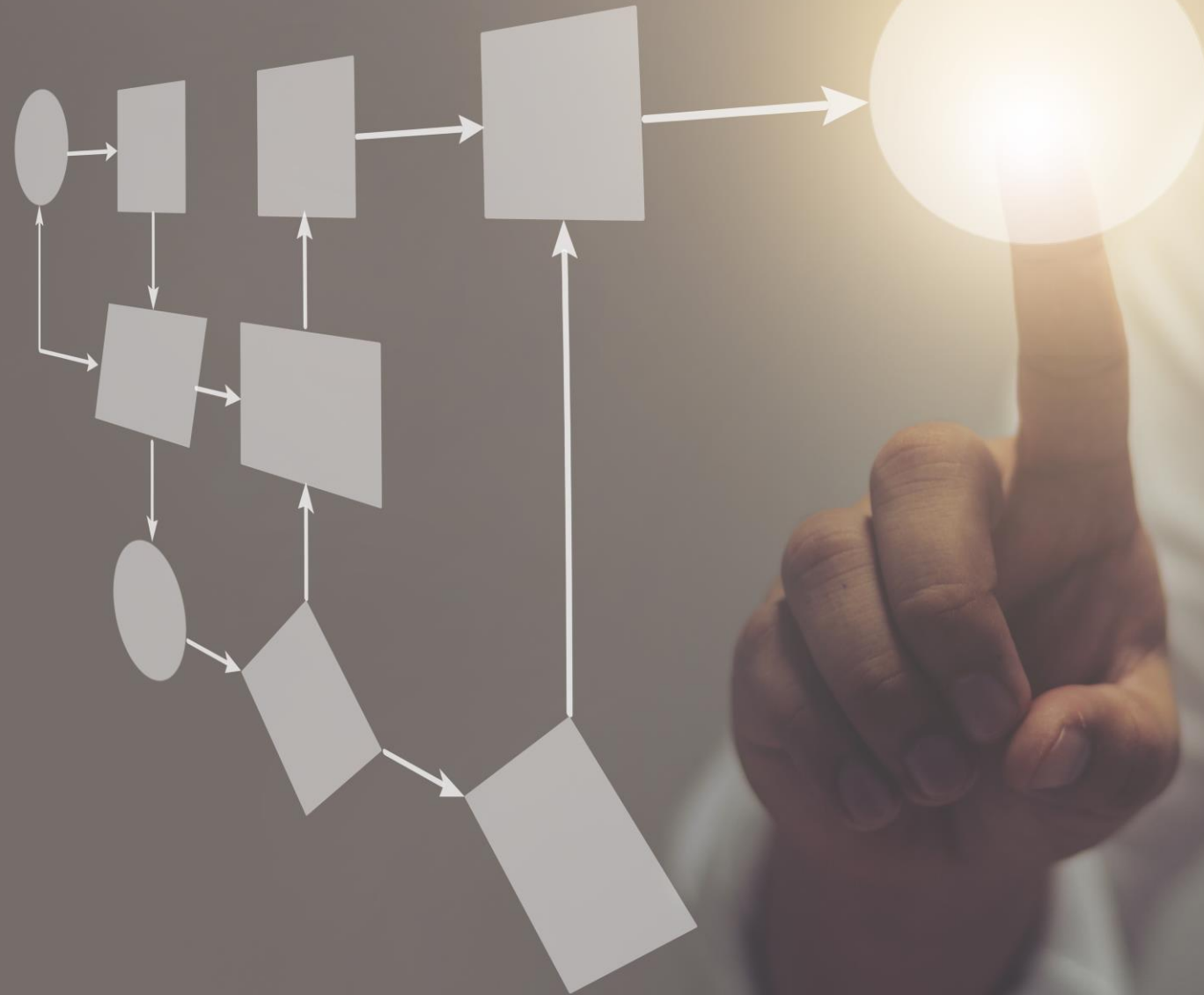
Some may prefer – no disturbances is key



Compliance, governance & operations can slow us down



Automating will help us go faster, be more efficient

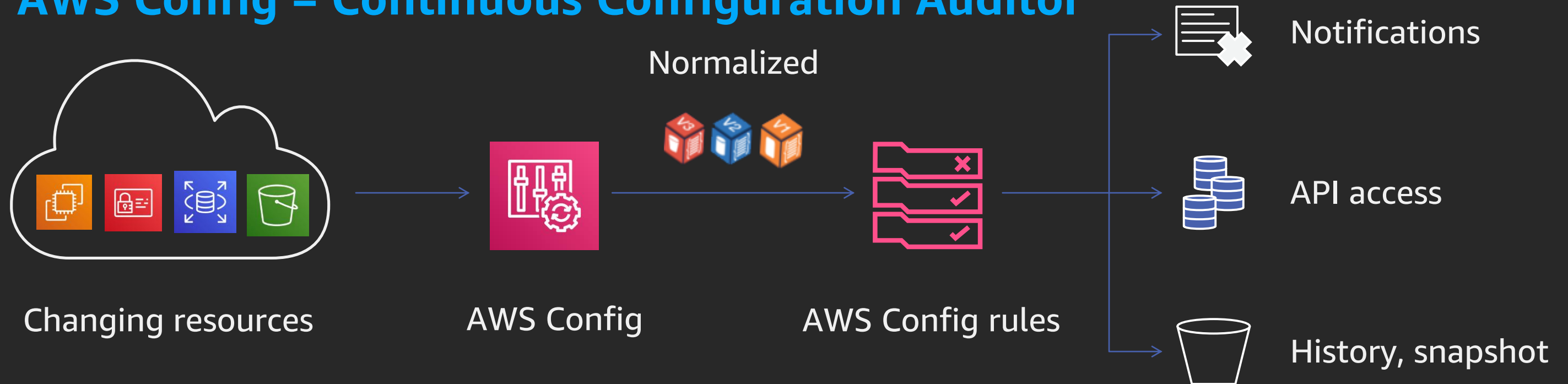


AWS Config

AWS Config

- ✓ Continuously tracks resource configuration changes
- ✓ Evaluates the configuration against policies defined using AWS Config rules
- ✓ Alerts you if the configuration is noncompliant with your policies using Amazon Simple Notification Service (Amazon SNS) and Amazon CloudWatch Events

AWS Config = Continuous Configuration Auditor



Continuous assessment using AWS Config rules



Analyze configuration changes

60+ pre-built rules provided by AWS

Custom rules using AWS Lambda

GitHub repo: community-sourced rules

Aggregate compliance into a central account

Compliance history

AWS CloudFormation

AWS CloudFormation at a glance

Enables provisioning and management of your infrastructure as code



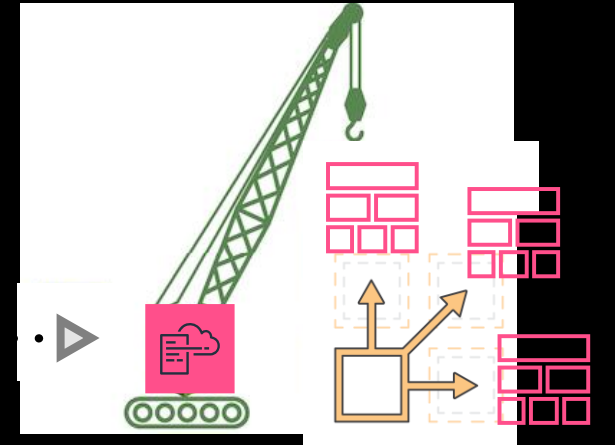
Code in YAML or JSON directly or use sample templates



Upload local files or from an S3 bucket



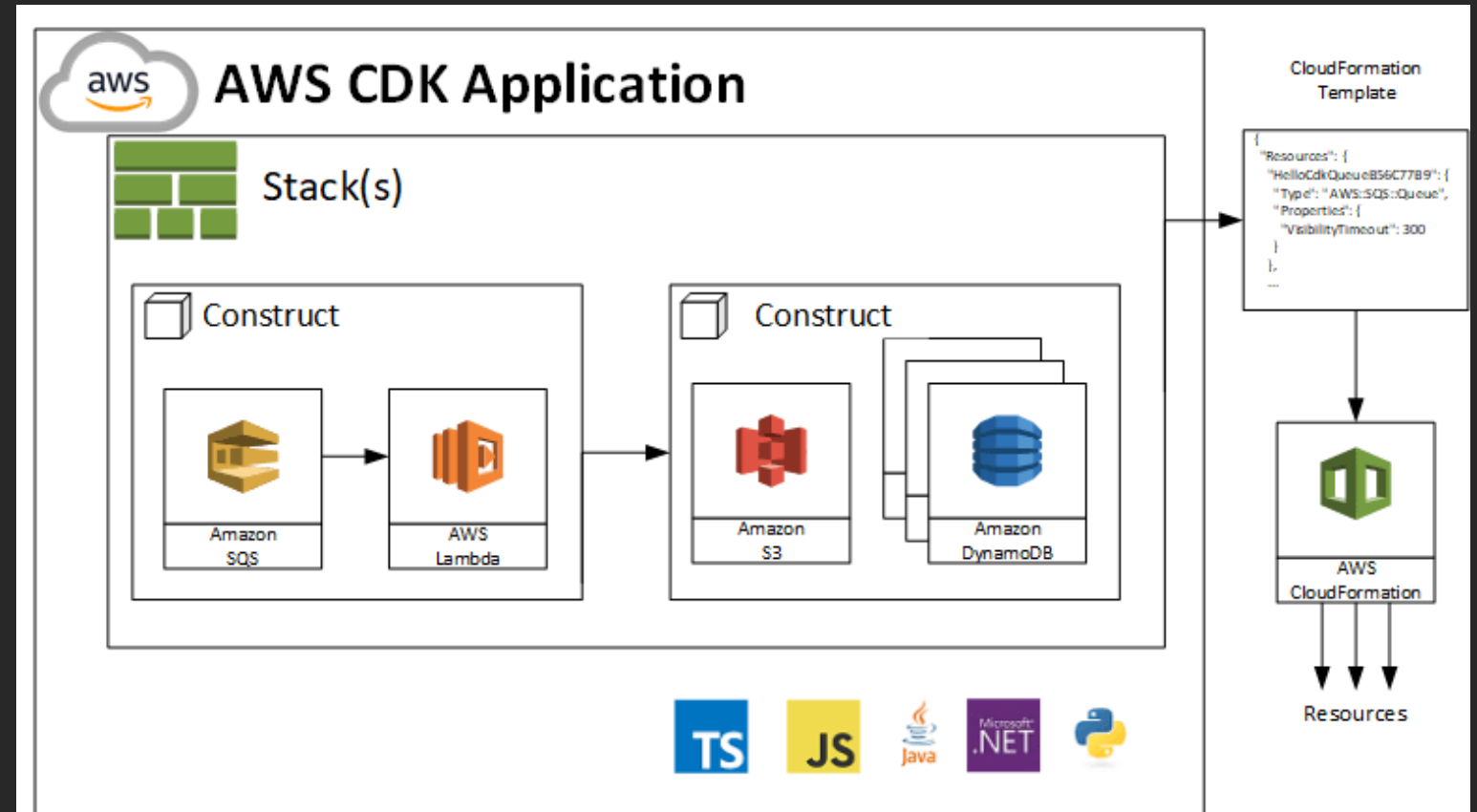
Create stack using console, API, or CLI



Stacks and resources are provisioned

AWS Cloud Development Kit

- AWS CDK allows you to define your cloud resources in a familiar programming language
- The AWS CDK supports TypeScript, JavaScript, and Python
- The AWS CDK currently provides developer preview support for C#/.NET, and Java



AWS CloudTrail

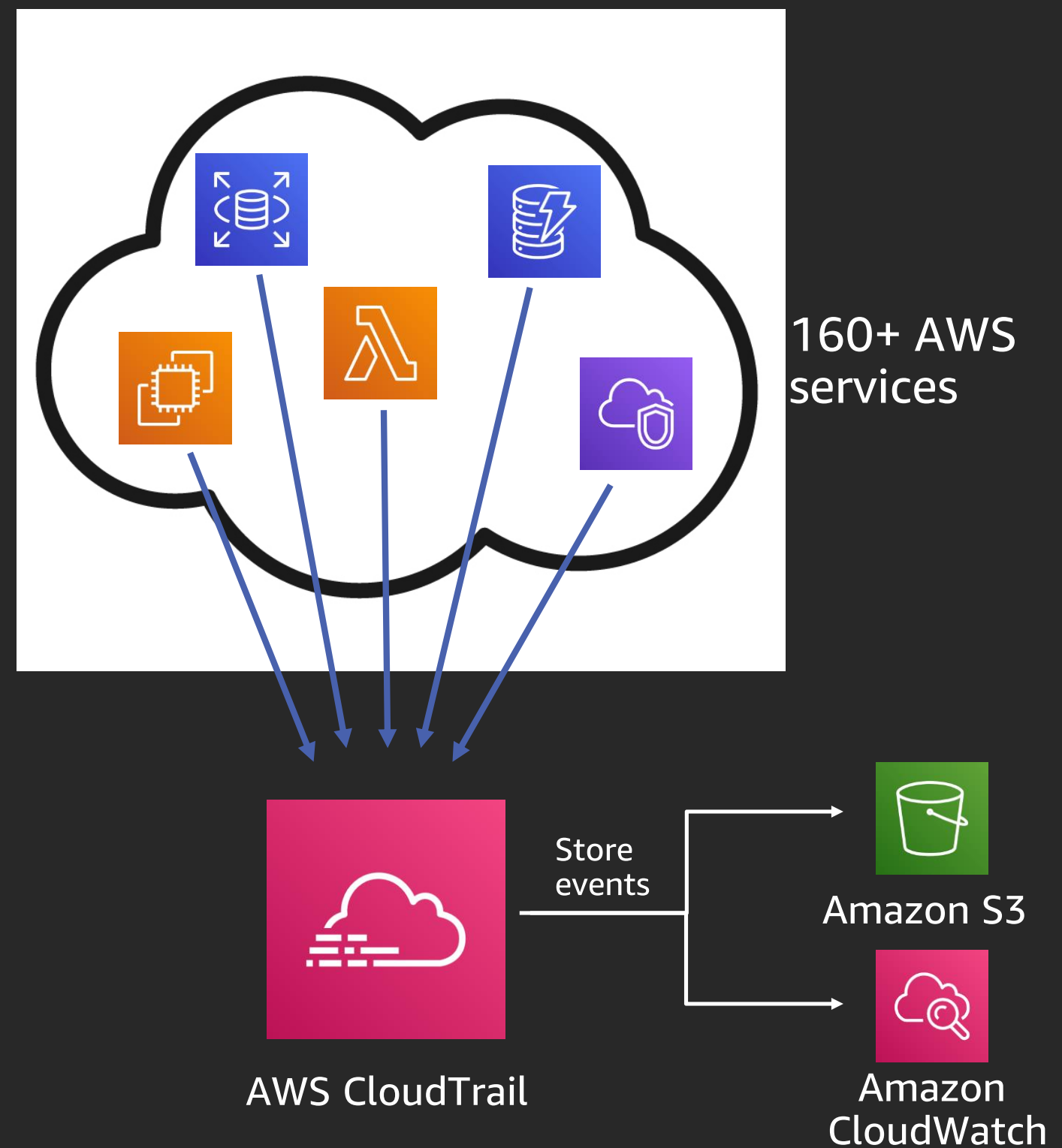
AWS CloudTrail events

Integrated with over 160 AWS services

Automatically gathers usage activity

Records event details, such as operation, principal, request, and response attributes

Delivers events to central locations



Event types

Management events

Resource control actions, such as update and delete actions on an Amazon Elastic Compute Cloud (Amazon EC2) instance

Generally infrequent compared with data events

Available from nearly all services



Data events

Fine-grained actions, such as reading from an object in Amazon S3

Can be very high-frequency events

Available for Amazon Simple Storage Service (Amazon S3) and AWS Lambda



AWS Service Catalog

AWS Service Catalog



Standardize
Control
Govern



Agility
Self-service
Time to market

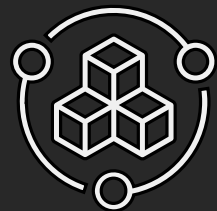


Allows organizations to create and manage
catalogs of IT services and software on AWS

Organizations

Developers

Self-service with preconfigure compliance

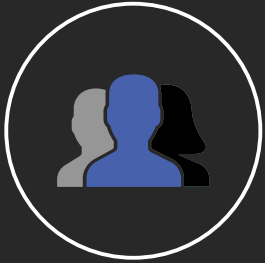


Standardizes best practices

AWS Systems Manager

Operate safely and at scale

The operations cockpit for any cloud at any scale



Group

The building blocks of your applications



Visualize

Operational insights for applications
Brings other AWS services in a single console



Act

Using AWS best practices with built-in safeties

Support AWS, on premises,
and other clouds

Use cross-platform capabilities manage
both Windows and Linux

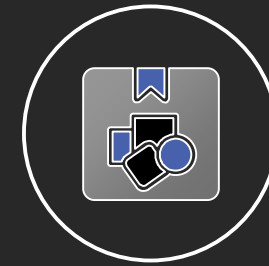
AWS Systems Manager capabilities



Resource Groups



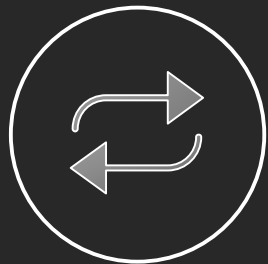
Patch Manager



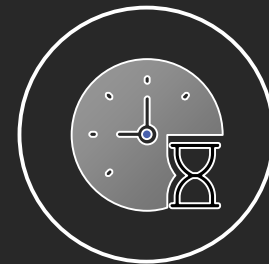
State Manager



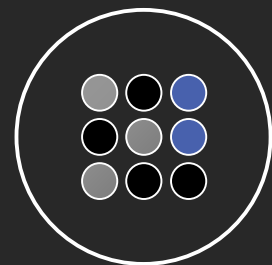
Run command



Automation



Maintenance Window



Inventory



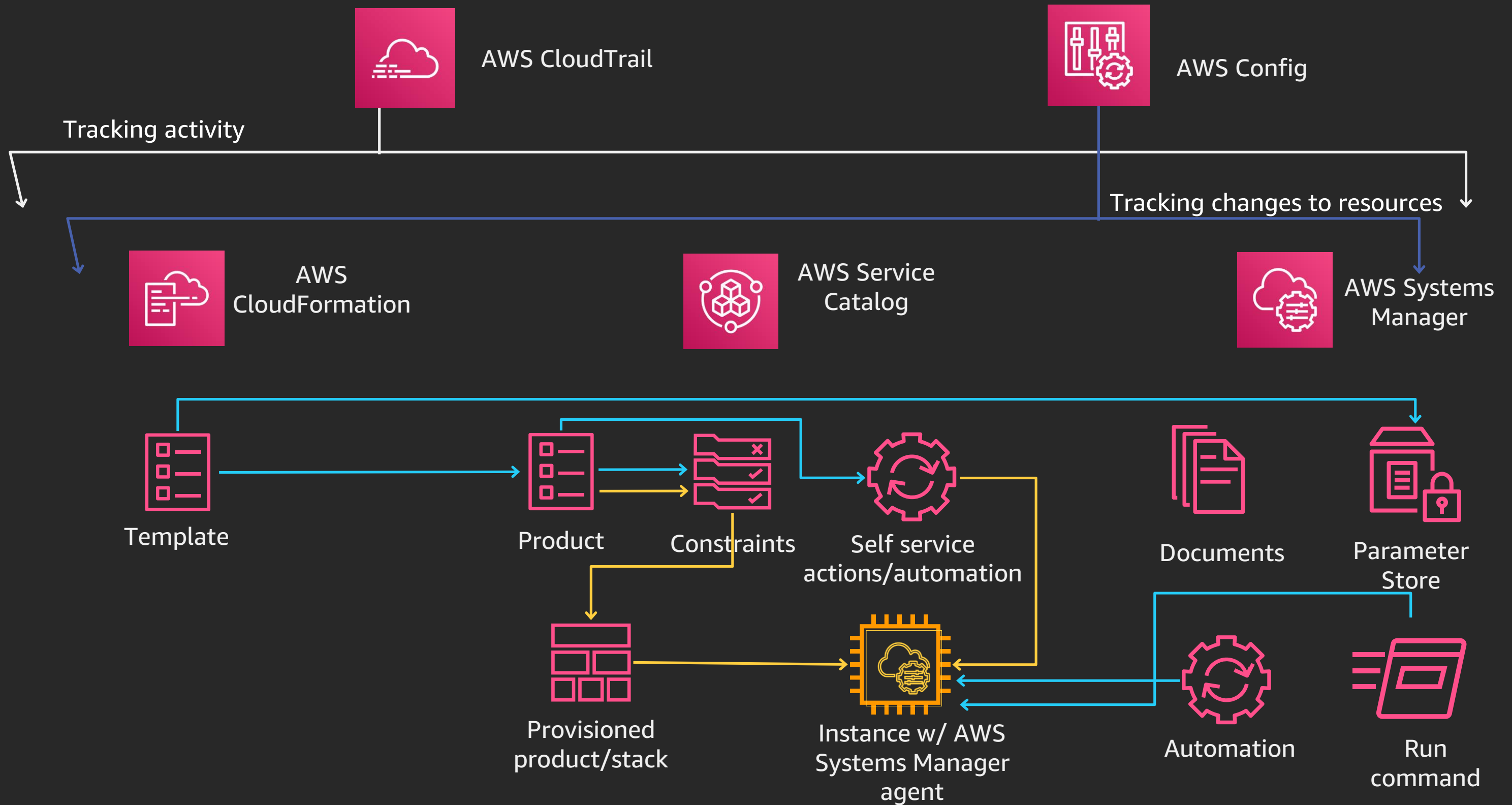
Parameter Store



Session Manager



Distributor



Hands-on lab intro

Section 1: Hello-world labs

- Provide groups the ability to deploy instances for testing purposes
- Give groups the minimal set of privileges to AWS services
- Groups can only deploy into specific VPCs
- Groups can only deploy into private subnets
- Groups can only utilize t3 instance types for testing
- Ability to reboot instances
- Ability to install software on instances

Section 2: Cross-service objectives

- Provide groups the ability to deploy instances for testing purposes
- Give groups the minimal set of privileges to AWS services
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- Groups can only utilize t3 instance types for testing
- Ability to reboot instances
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Link to workshop

<https://reinvent2019.aws-management.tools/mgt312/en/>

Wrap-up

Links to documentation

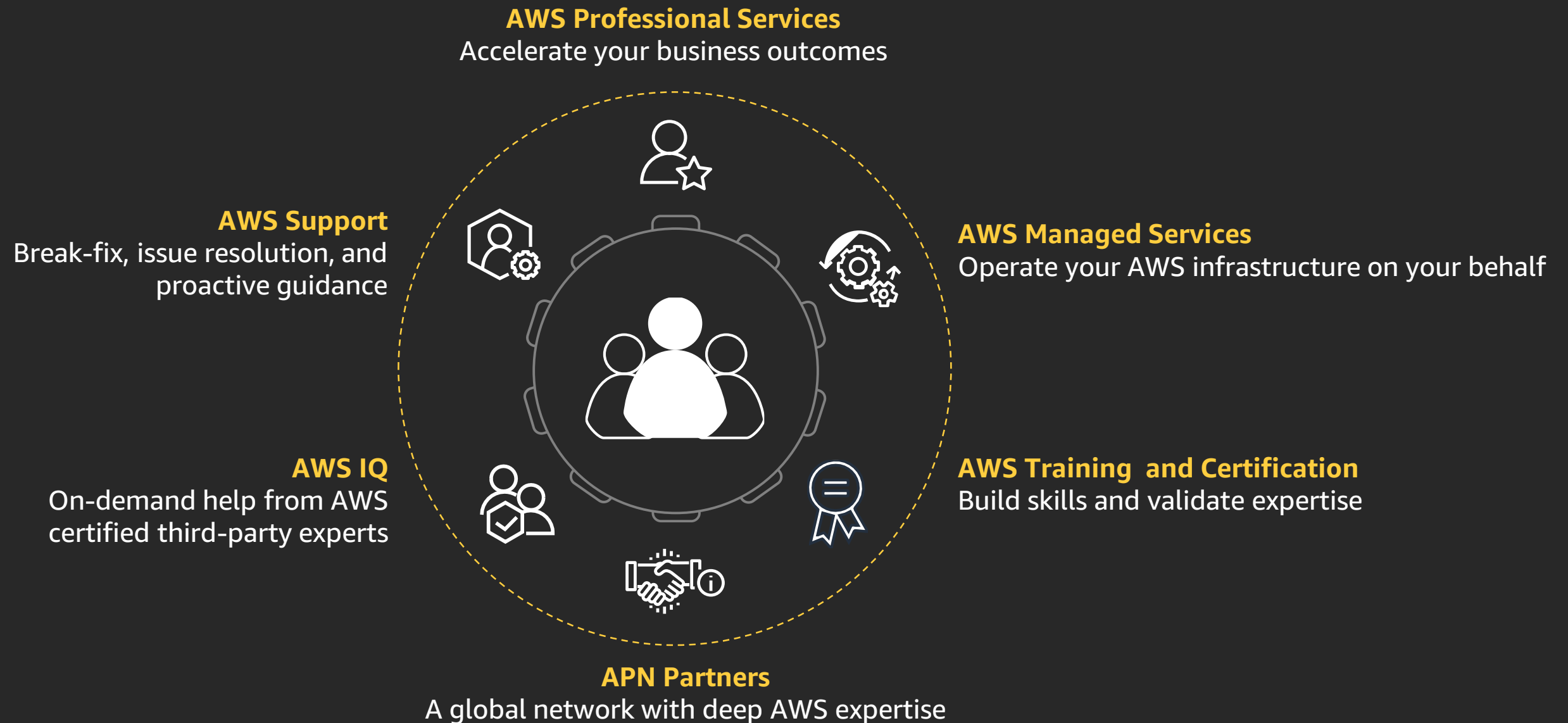
- AWS Service Catalog
 - <https://docs.aws.amazon.com/servicecatalog>
- AWS CloudTrail
 - <https://docs.aws.amazon.com/cloudtrail>
- AWS Systems Manager
 - <https://docs.aws.amazon.com/systems-manager>
- AWS Config
 - <https://docs.aws.amazon.com/config/>
- AWS CloudFormation
 - <https://docs.aws.amazon.com/cloudformation/>

“The real mechanism for corporate governance is the active involvement of the owners.”

Lou Gerstner
Former CEO of IBM

AWS customer enablement

Migrate and build faster in the cloud



Thank you!



Please complete the session
survey in the mobile app.