aws

AI & Machine Learning

Boost your IT operational expertise with AIOps

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Today's Agenda

- DevOps in 2022

- AIOps: Insights into apps and infrastructure

- Amazon DevOps Guru

- Next Steps

Pace of business is accelerating

Business markets are changing at an accelerated rate
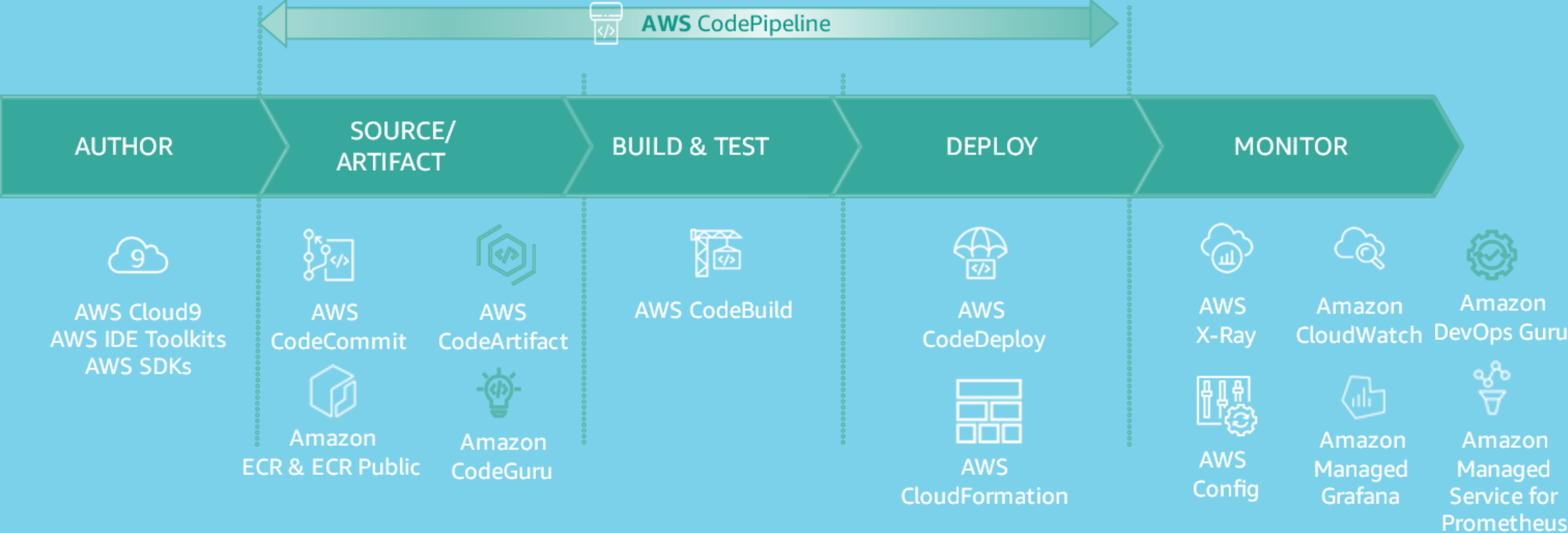
Agility

Elasticity

Faster innovation

Cost savings

All require operations to keep up

DevOps trends in 2022

- Shift Towards serverless computing
- DevSecOps – ShiftLeft
- AI-driven DevOps

AWS CodePipeline

AUTHOR	SOURCE/ ARTIFACT	BUILD & TEST	DEPLOY	MONITOR

AWS Cloud9
AWS IDE Toolkits
AWS SDKs

AWS CodeCommit

AWS CodeArtifact

Amazon ECR & ECR Public

Amazon CodeGuru

AWS CodeBuild

AWS CodeDeploy

AWS CloudFormation

AWS X-Ray

AWS Config

Amazon CloudWatch

Amazon Managed Grafana

Amazon DevOps Guru

Amazon Managed Service for Prometheus

To make DevOps data actionable by 2023, 40% of enterprises will embrace AI/ML to improve efficiency, remote collaboration, and execution

Key challenges
Operational challenges at scale

Data volumes are large and disparate

When an issue occurs, users spend a lot of time and effort manually correlating across data sources and tools

As new services are adopted, deep DevOps/CloudOps expertise is required to configure new alarms and monitoring procedures

Alarms and notifications from multiple tools cause alarm fatigue and an inability to identify the most critical issue

AIOps: Insights into apps and infrastructure

Monitoring and Observability

CloudWatch Service Lens

- Container Insights
- Lambda Insights
- Synthetics
- Contributor insights

CloudWatch metrics

Amazon Managed Service for Prometheus

AWS X-Ray

CloudWatch logs

Amazon OpenSearch Service

Custom-built dashboards; data correlation, collection, configurations, etc.
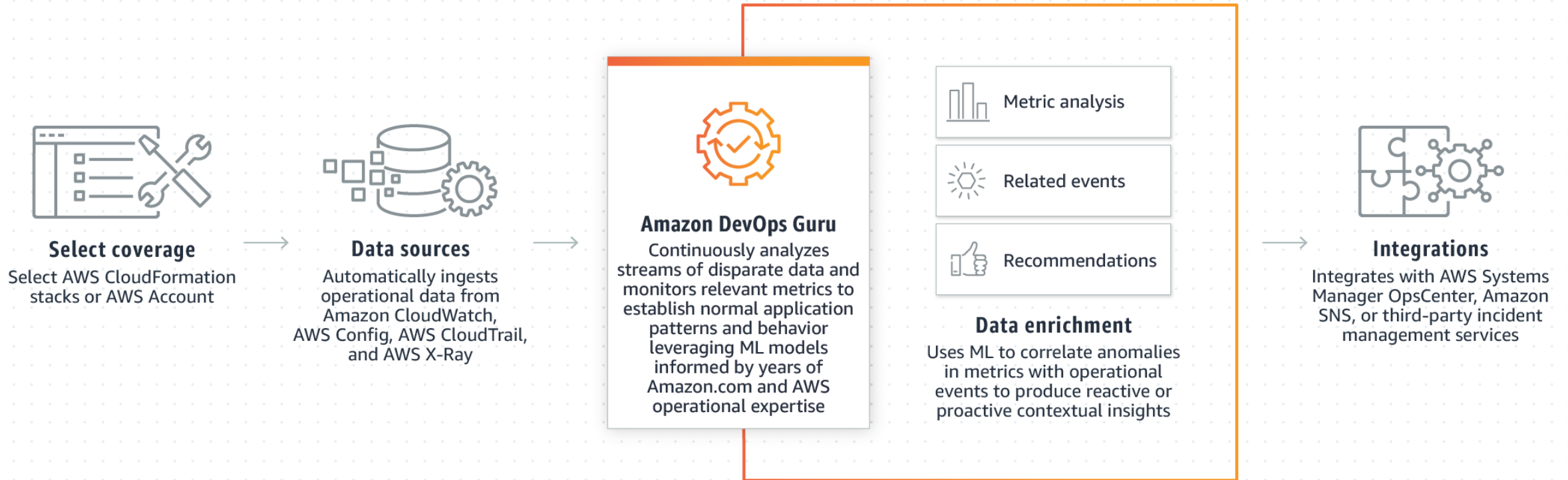
Amazon Managed Grafana

Insights and ML

Instrumentation

CloudWatch agent

X-ray agent

AWS Distro for Open Telemetry

AIOps: Amazon DevOps Guru

Select coverage
Select AWS CloudFormation stacks or AWS Account

Data sources
Automatically ingests operational data from Amazon CloudWatch, AWS Config, AWS CloudTrail, and AWS X-Ray

Amazon DevOps Guru
Continuously analyzes streams of disparate data and monitors relevant metrics to establish normal application patterns and behavior leveraging ML models informed by years of Amazon.com and AWS operational expertise

Metric analysis

Related events

Recommendations

Data enrichment
Uses ML to correlate anomalies in metrics with operational events to produce reactive or proactive contextual insights

Integrations
Integrates with AWS Systems Manager OpsCenter, Amazon SNS, or third-party incident management services

Amazon DevOps Guru

Easy to set-up and easy-to-use

- No configuration required. No ML knowledge needed

Auto detect operational issues

- Continuously analyzes streams of disparate data and metrics to determine application behavior using ML

Quick resolution

- Gathers relevant data together; metrics, event logs, and recommendations
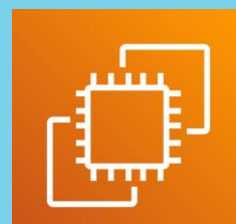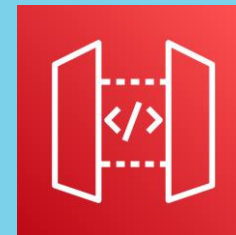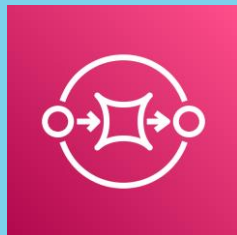
Reduce noise

- Helps alarm fatigue by automatically calibrating notifications and grouping related anomalies

Automatically scales

- Easily scales and maintains availability as new AWS workloads are added
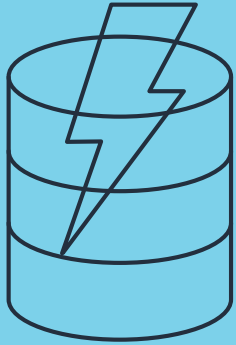
Supported AWS Services

New: Amazon DevOps Guru for RDS

- Detect and diagnose RDS database performance bottlenecks and operational issues

- Reduce time to resolution from days to minutes

- Natively integrate with AWS services to automatically receive notifications

Amazon DevOps Guru for RDS: How it works

Aurora +
Performance Insights

Metrics
Ingestion

Anomaly Metric
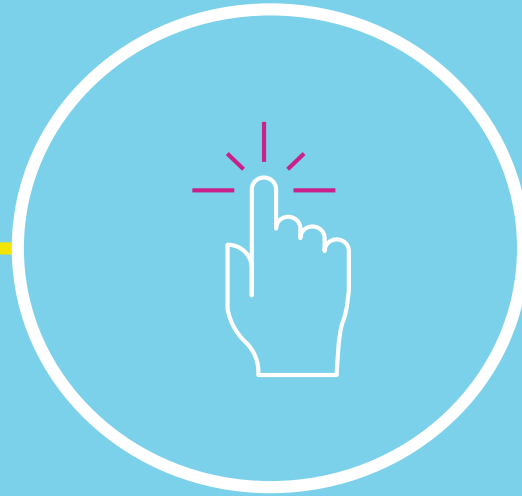Analysis

Amazon DevOps
Guru

Demo

How to get started and what's next?

Find us in the AWS Console

Free Trial

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Thank you!