AWS re:Invent

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Learn how to drive deployment frequency through automation

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Adoption of cloud native – The CNCF 2020 Survey

1,324 responses – 54% indicated they were part of the CNCF community

- 92% use containers in production
  - Up from 84% last year, and up 300% from the first CNCF survey in 2016
- 83% use Amazon Elastic Kubernetes Service (EKS) in production
  - Up from 78% last year
- 82% use continuous integration and delivery (CI / CD) pipelines in production
- 27% use service mesh in production
  - A 50% increase over last year

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Agenda

Cloud native architectures – Challenges and techniques

AWS services at your use

Demo

Why AWS Marketplace and how it can help

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Cloud-native applications

A software development approach that uses cloud computing to build and run scalable applications in modern, dynamic environments

DevOps

DEV

CI / CD

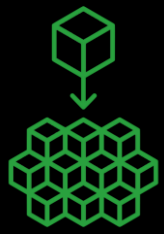


Containers



Lightweight, standalone software package

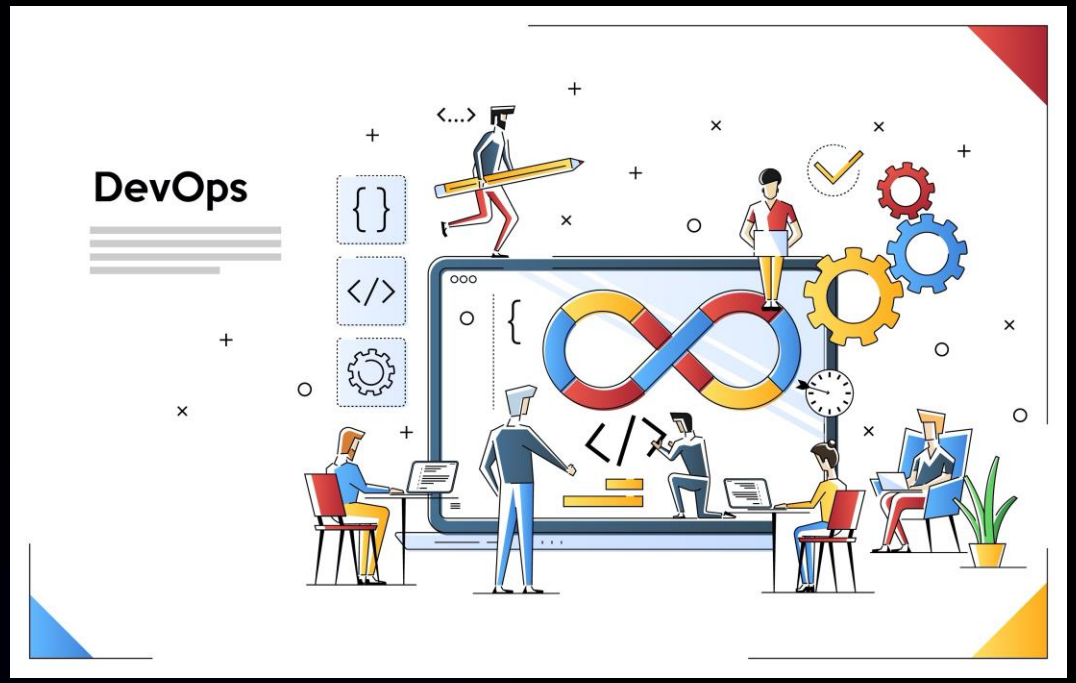
Microservices



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Cloud-native challenges





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How to navigate – Techniques



Declarative vs. imperative



Complexity and security



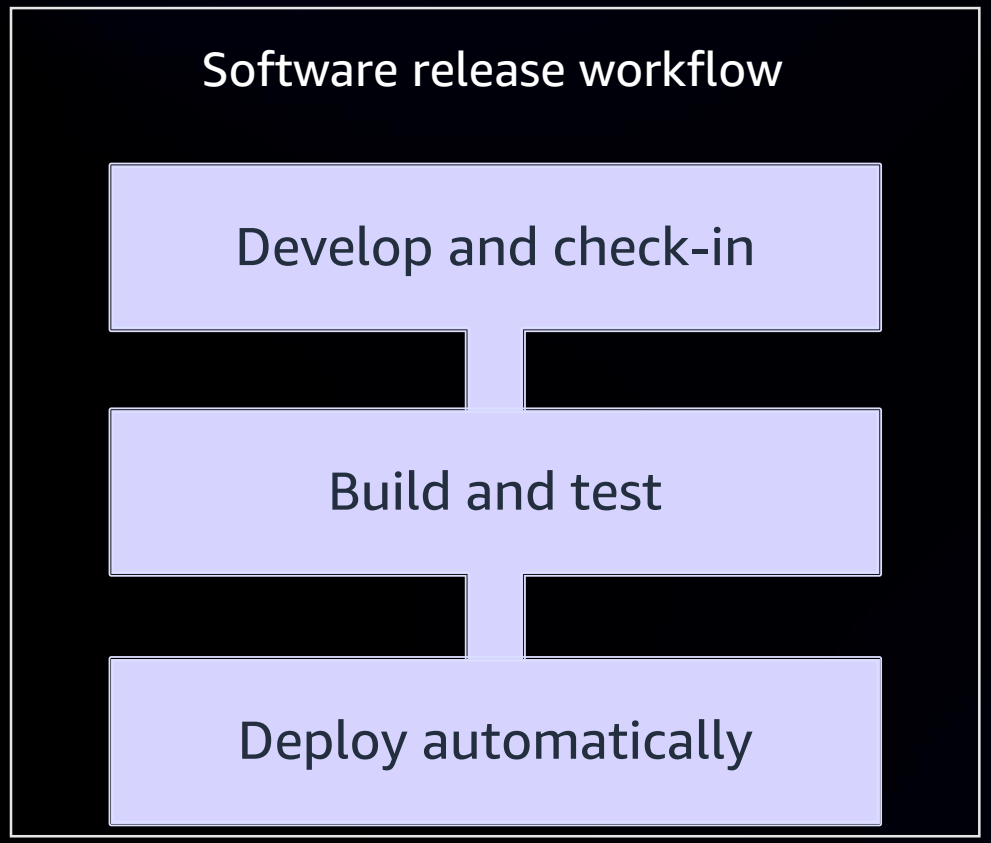
DevOps @ scale

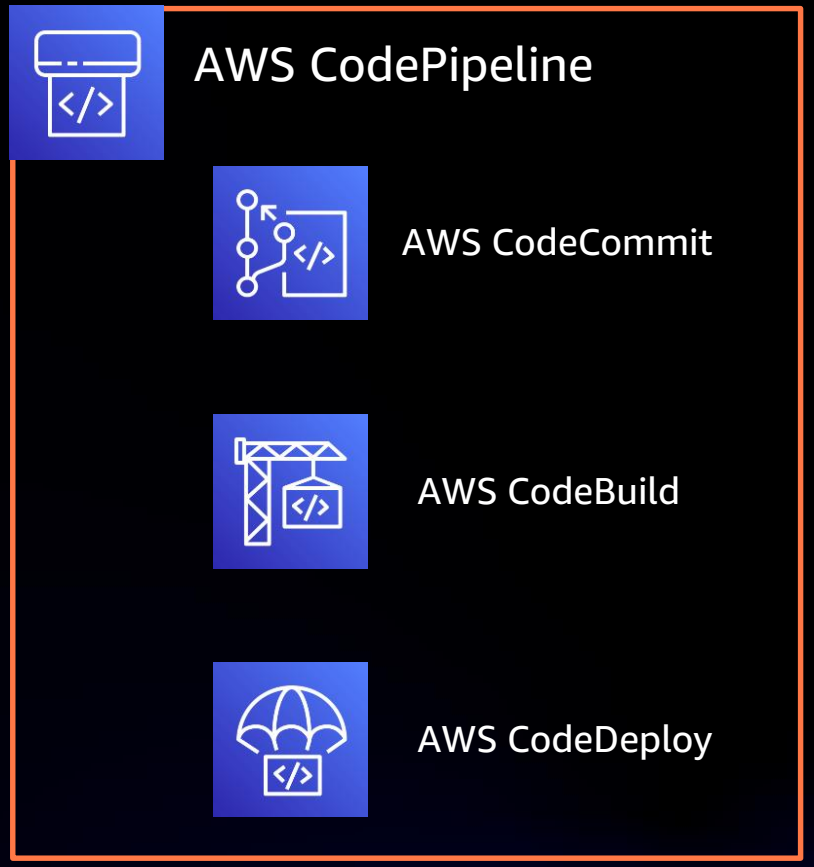


Deployment agility

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Continuous integration and continuous delivery





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Containers

Deploy cloud-native applications



Amazon Elastic Container Service



Amazon ECS Anywhere



Amazon Elastic Container Service for Kubernetes



Amazon EKS Anywhere / Distro

Container services

Where can containers run



AWS Fargate



On-prem servers and VMs



Amazon EC2



AWS Outposts

Hosting

Share and deploy container software



Amazon Elastic Container Registry

Registry services

"Amazon ECS enabled Coursera to focus on releasing new software rather than spending time managing clusters."

Frank Chen, Software Engineer, Coursera

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Choose where to run your code



Amazon Lambda



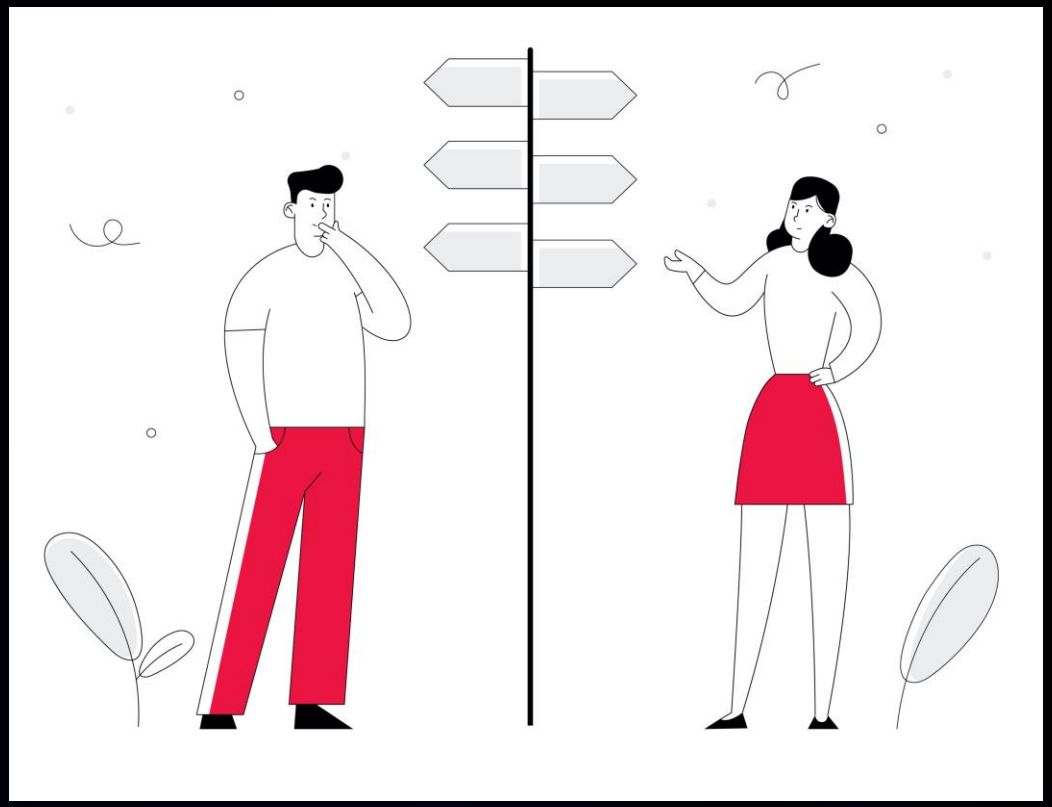
Amazon ECS



Amazon EKS



AWS Fargate



Credit: Freepik Company

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Auditable and traceable

Collect, aggregate, and summarize



Amazon CloudWatch Container Insights



AWS CloudTrail

Monitoring and alerting



Amazon Managed Service for Prometheus

Analyze and debug production, distributed applications



AWS X-Ray



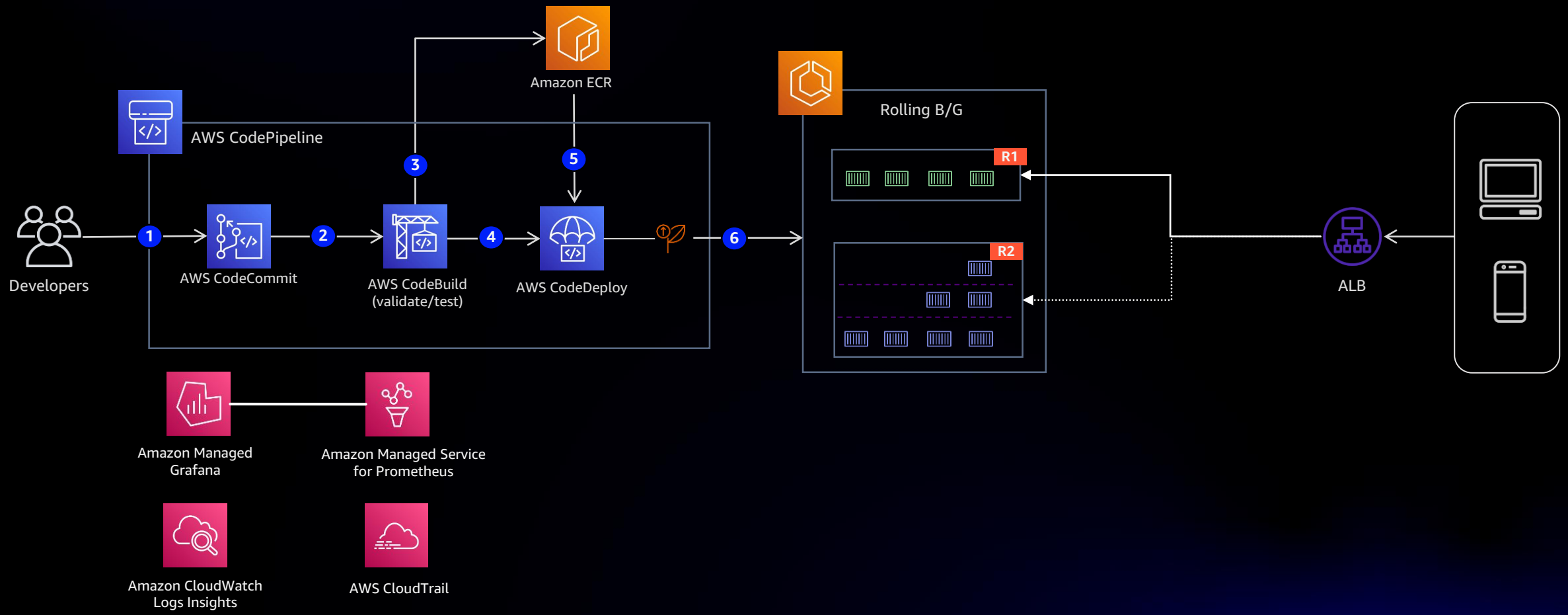
Amazon Managed Grafana

"With traditional IT, it would take weeks or months to contend with hardware lead times to add more capacity. Using AWS, we can look at user metrics weekly or daily and react with new capacity in 30 seconds."

Richard Crowley, Director of Operations, Slack (former)

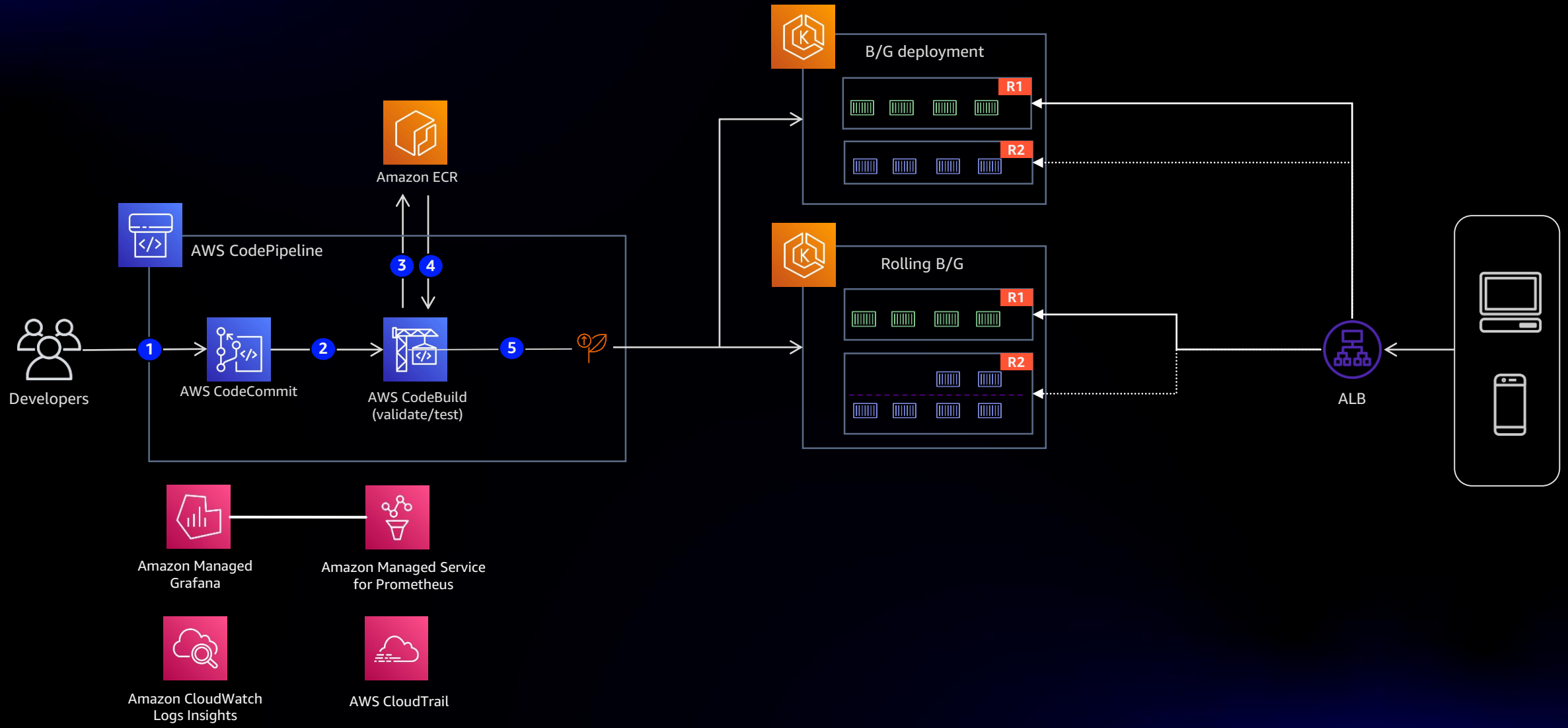
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Blue/green deployment with AWS CodeDeploy



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DevOps pipeline with blue/green deployment

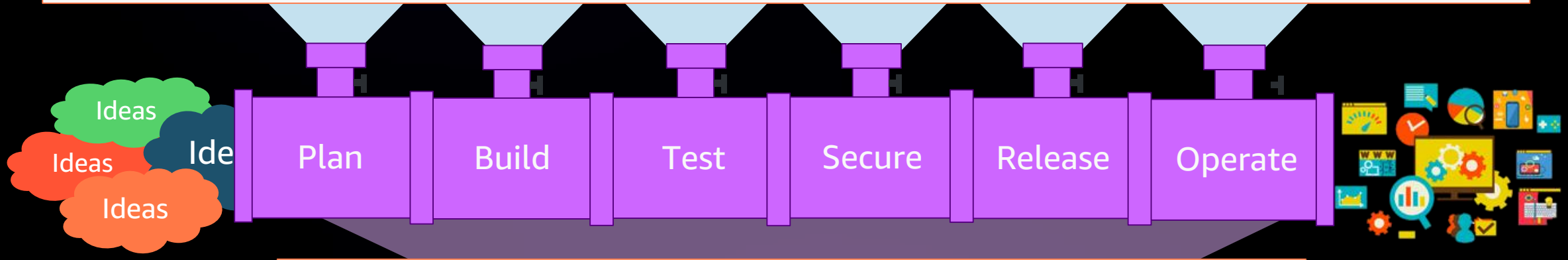


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AWS Marketplace: Destination for third-party DevOps and CD solutions to use with AWS

DevOps core practices

- Collaboration & communication
- Microservices and everything-as-code
- Continuous integration
- Testing & quality management
- Continuous delivery
- Security & compliance
- Monitoring & observability
- Incident management



Sample AWS Marketplace solution providers

armory · VMware Tanzu · circleci · GitLab · CloudBees. · harness · JFrog · TRICENTIS · PagerDuty · MICRO FOCUS · splunk> · HashiCorp · CHEF · New Relic. · DATADOG

1,600+ vendors | 8,000+ products

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AWS Marketplace

A curated digital catalog that helps you find, subscribe to, deploy, and manage software, services, and data products

Selection, speed, and agility



Quickly procure and use products from software sellers to help address your compliance needs

Flexible pricing and terms



Test software, pay as you go, negotiate custom terms, and save money with long-term commitments

Control and governance



Centralize governance, innovate quickly, and launch software products that align with your organization's policies and compliance requirements

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AWS Marketplace for containers



Find and subscribe to container products and deploy them on Amazon container services

Choose from hundreds of curated and trusted third-party container-based products

Container images are vetted when the product is listed. Buyers also get notified when new versions are available

Deploy container products on Amazon ECS, AWS Fargate, Amazon EKS

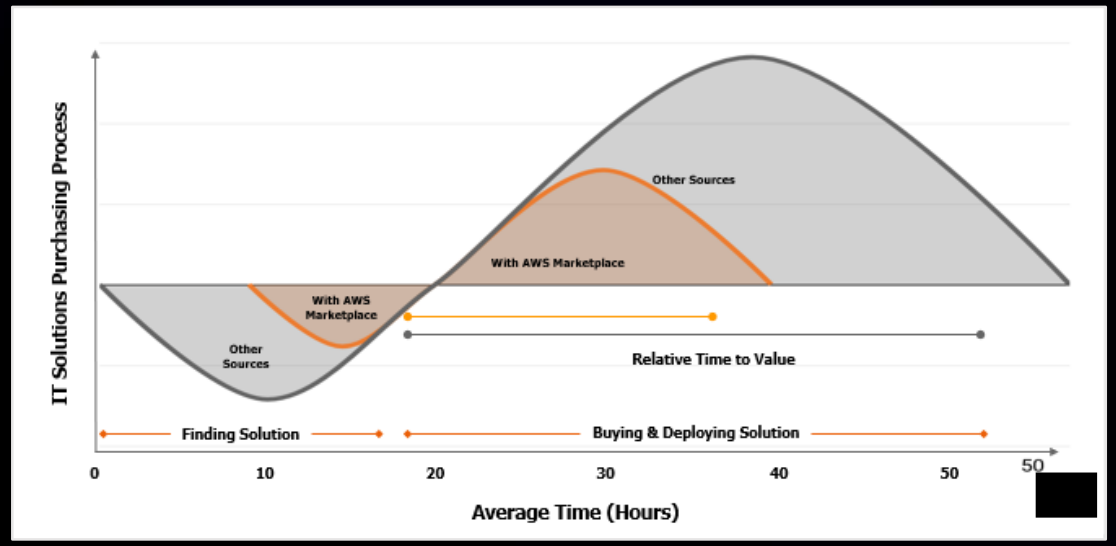
Products are available with flexible pricing options including free, bring your own license, usage-based, and contract-based pricing models

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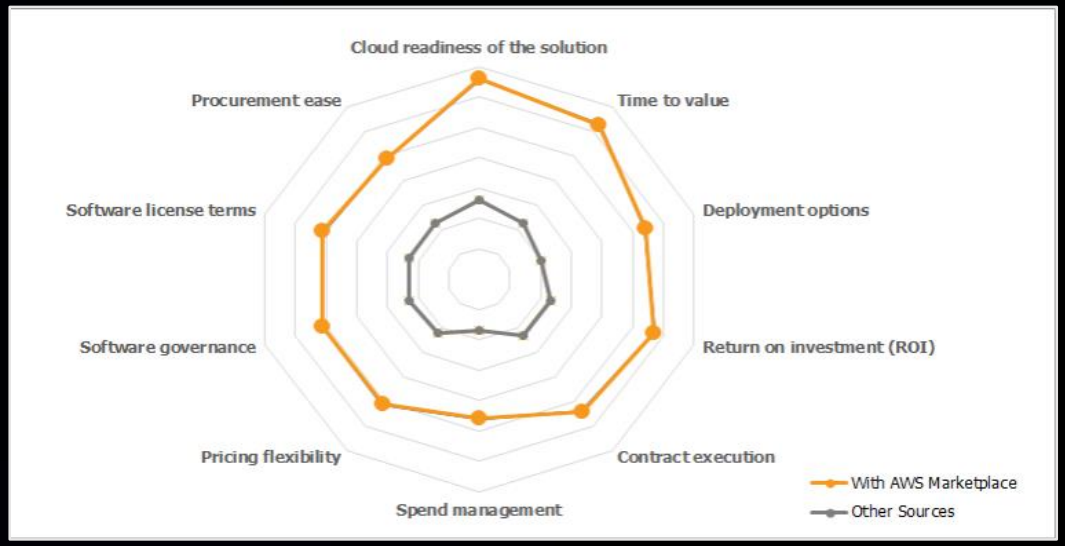
Why AWS Marketplace?

Find, subscribe to, and deploy solutions quicker



IT decision-makers (ITDMS) cut their time in half using AWS Marketplace compared to other sources.

Make more-satisfying purchases



ITDMS feel 2.4x better about purchasing using AWS Marketplace compared to other sources.

*Amazon Web Services (AWS) Marketplace surveyed 500 IT decision-makers (ITDMs) and influencers across the US to understand software usage, purchasing, consumption models, and compared savings.

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Takeaways

- Modernize your deployment strategy to support containers and DevOps at scale
- Reduce deployment complexity and implement security guardrails through centralized automation
- Easily experiment with software using AWS Marketplace

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Thank you!

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