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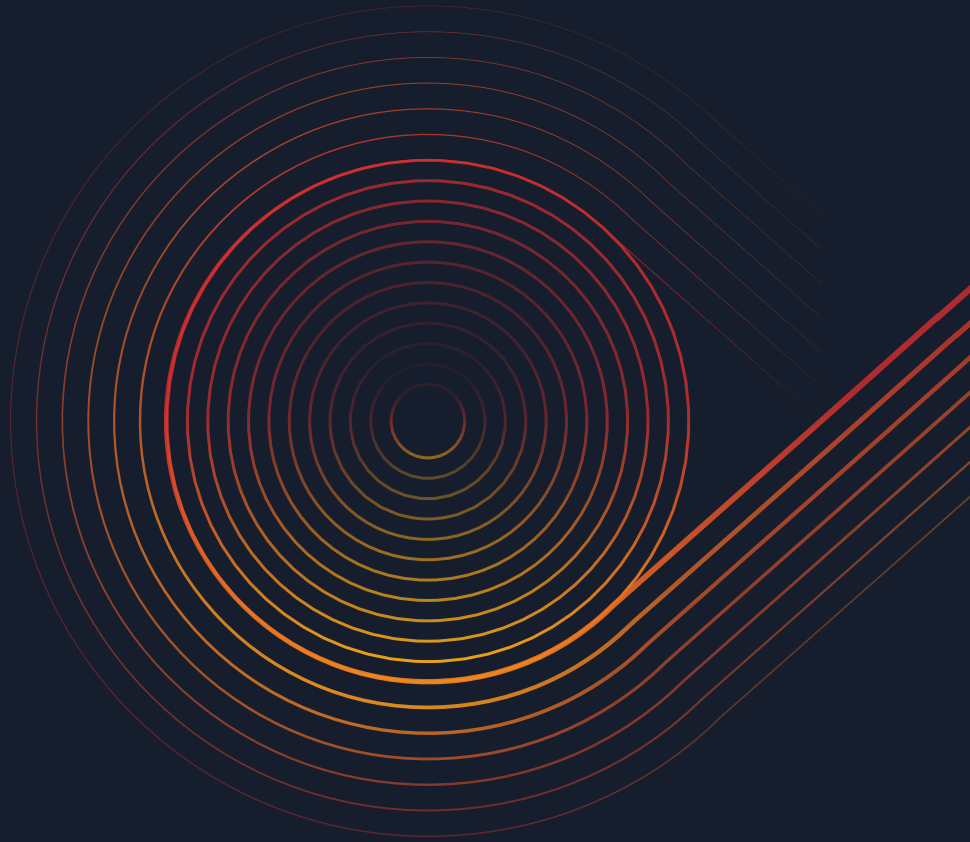
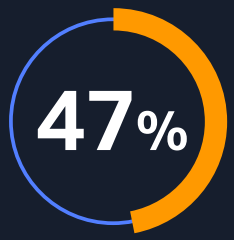
Modern Apps Need Modern Ops

Build, manage, and operate your modern apps on AWS

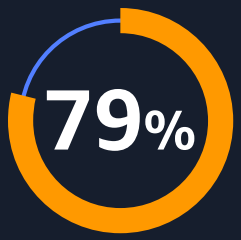


Companies are increasingly **global,** and products are increasingly **digital**

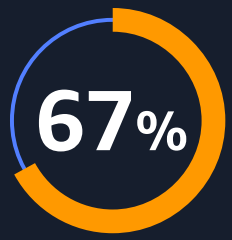
Organizations of all sizes and industries rely on applications to support their businesses. How customer-facing and internal applications perform can significantly impact customer satisfaction, loyalty, employee productivity, and efficiency. If apps do poorly or fail, it can irreversibly impact customer experience and bottom-line. Building apps to take advantage of cloud-native benefits enables organizations to scale effectively to meet increasing demands. Today, with the pressure to stay competitive and influential, organizations need to reliably deliver new application features, fast.



of CEOs said they are being challenged by their board to make **progress** in digital business



of CIOs believe that digital business is making their IT organizations **better prepared** to change



of all business leaders believe they must pick up the **pace** of digitization to remain competitive

Source: Gartner

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Modern apps drive business growth

Modern applications, or modern apps, take advantage of cloud-native architectures and are built using microservices, containers, and serverless technology. Organizations modernize apps so they can innovate rapidly and compete in fast-moving markets. Modern apps are globally available, scale to support millions of users all over the world, and can deliver millisecond latency while processing petabytes of data. Modern apps help reduce total cost of ownership, increase developer efficiency, and increase business agility.

Nearly 3x
more features delivered using AWS

25% more
productive application development teams

37% faster
time to market

343% increase
in code deployment frequency

Source: **IDC**, **AWS**, **AWS**

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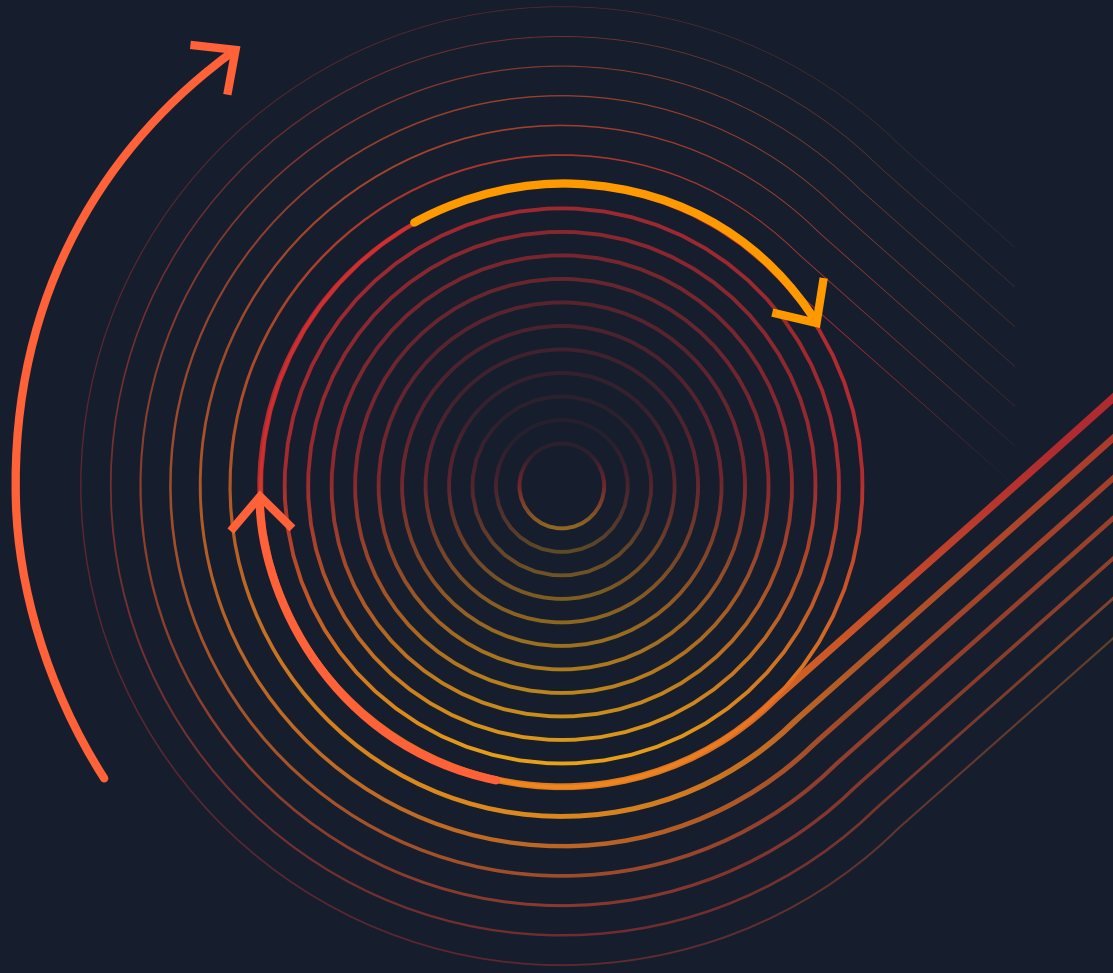
Why Modern Apps need Modern Ops

Modern technologies add complexity to application environments and create new challenges when it comes to operations. For example, traditional operations tools and processes often struggle to handle the volume of operational data that modern environments generate. Mix legacy workloads in, and the complexity to manage and govern the dynamic IT environment increases. Modern Ops are the answer.

Modern Ops bring operations closer to development by providing developers visibility and control. This approach leverages code, automation, and integration to accelerate developer productivity and improve innovation.



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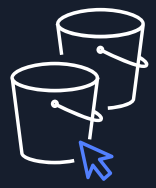
Modern Ops scale agility

Modern Ops enable businesses to:

Operate anywhere

Observe and gain actionable insights



Improve application resiliency

Automate governance and compliance

Let's dive into each of these benefits...

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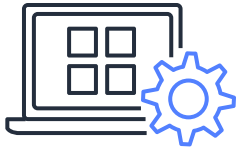
MODERN OPS

Operate anywhere



Manage applications and resources across cloud and hybrid environments from a single interface and dashboard

- Automate and orchestrate workflows for visibility and control
- Manage apps, resources, and changes in an automated way to improve operational effectiveness across the software development lifecycle
- Drive consistency across the organization with automated and integrated operations that enable development and operations teams to work closely together, fostering a DevOps culture

AWS Systems Manager
Operate and manage your infrastructure securely at scale

AWS CloudFormation
Speed up cloud provisioning with infrastructure as code

AWS Proton
Automated management for container and serverless deployment

AWS OpsWorks
Automate operations with Chef and Puppet

"With AWS, our DevOps teams are spending 50 percent less time managing clusters and infrastructure-level debugging, along with capacity audits."

—Jaipal Deswal
Senior Vice President, Technology, MakeMyTrip India Pvt. Ltd.

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MODERN OPS

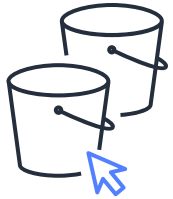
Improve application resiliency

A strong operational stance improves application availability and resilience, accelerating application development

- Modern apps enjoy cloud benefits of high availability, resiliency, and scalability, so to ensure application availability consistently at scale, it is critical to continuously verify the integrity of operational stance
- Centrally track, manage, and validate application KPIs such as uptime, Mean Time To Repair (MTTR), Recovery Time Objective (RTO), and Recovery Point Objective (RPO)
- Improve code quality, performance, and security with integrated and automated Continuous Integration/Continuous Delivery (CI/CD)
- Continuous testing ensures resiliency and machine learning-powered code insights reduce error rates

"To roll out an environment built in Japan to AWS Regions in Europe, Thailand, and India while fulfilling the legal requirements of each area, we needed CI/CD and infrastructure as code."

—Daiki Nogami
Chief of Honda Global Platform Department, Honda Motor Co., Ltd.



AWS CodeStar
Quickly develop, build, and deploy applications on AWS

Amazon CodeGuru
Automate code reviews and optimize application performance with ML-powered recommendations

Amazon DevOps Guru
ML-powered cloud operations services to improve application availability

AWS Fault Injection Simulator
Improve resiliency and performance with controlled experiments

AWS X-Ray
Analyze and debug production, distributed applications

Amazon CloudWatch
Observability of your AWS resources and applications on AWS and on-premises

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MODERN OPS

Observe and gain actionable insights

Understand application and infrastructure health and performance to build and deploy high performing applications

- Applications and resources generate billions of metrics, logs, and trace data, and continuous observability enables insights into this complexity
- DevOps teams need to look at application behavior to improve Mean Time To Detection (MTTD), so centralized observability with shared metrics is key to improving developer productivity and operational efficiency
- Leverage artificial intelligence and machine learning to detect anomalies and drive recommendations and automated remediation to improve app health and availability

"The most important benefit for us is the decrease in MTTR (Mean Time To Repair), as our DevOps team can quickly find issues across our container infrastructure."

—Vitaly Geraymovych
Co-Founder & Vice President Engineering, CloudPassage

Amazon CloudWatch
Observability of your AWS resources and applications on AWS and on-premises

AWS X-Ray
Analyze and debug production, distributed applications

Amazon Managed Service for Grafana
Powerful, interactive data visualizations for builders, operators, and business leaders

Amazon Managed Service for Prometheus
Highly available, secure, and managed monitoring for your containers

AWS Distro for OpenTelemetry
Collected correlated metrics and traces

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MODERN OPS

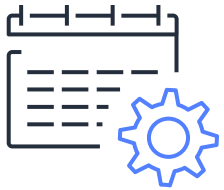
Automate governance and compliance

Implement guardrails to track and log application health and performance, be notified of unexpected application behavior, and automate remediation

- Continuous logging and storage of API activity of your AWS infrastructure ensures a complete and accurate historical record of resource activity for operational, security, or audit analysis
- Configure resources easily at scale, create rules that reflect your organization's policies, and use machine learning to automatically audit and remediate your configurations to keep app availability and uptimes
- Proactively alert and automate actions when issues are detected, such as suspicious activities and anomalous trends, to manage risk and stay in compliance

"We have provided a developer first methodology that allows teams to move quickly and helps us achieve self-service governance at scale."

—Demetrius Comes
VP of Engineering, GoDaddy



AWS Control Tower
Set up and govern a new, secure multi-account AWS environment

AWS CloudTrail
Track user activity and API usage

AWS Config
Record and evaluate configurations of your AWS resources

AWS Security Hub
Unified security and compliance center

Amazon CloudWatch
Observability of your AWS resources and applications on AWS and on-premises

AWS Systems Manager
Operate and manage your infrastructure securely at scale

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

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Agility drives scalable business growth with modern apps

Organizations need to ensure their modern apps deliver high performance consistently to uphold customer expectations and end-user experience. Modern Ops empower organizations with automation and machine learning capabilities to take on the new challenges of modern apps.

FICO

Delivered software services
in one day instead of weeks

finra

Built its stock trade validation system
in 3 months

Coca-Cola

Cut operational costs
by 40%

The Washington Post

Released over
50+ deployments per hour

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aws
Where Modern Ops meet Modern Apps
With AWS, you can confidently modernize your applications with a cloud operations model that gives you the power to build, manage, and govern securely and at scale.
Learn more about Modern Ops at AWS
Contact us
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