

# Optimize Cloud Applications for Resiliency, Performance, and Cost.

## Adopt Mature Cloud Operations as a Service.



### Automated Cloud Operations: The Foundation of Resilient, Agile Innovation

The benefits of adopting DevSecOps and site reliability engineering (SRE) practices are widely recognized. But charting the path to a comprehensive, smoothly running development and operations process that implements those practices is often considered a black art. The challenge is that DevSecOps, SRE, and cloud infrastructure are a maze of interlocking processes supported by a wide variety of tools. Finding people who understand the big picture and can execute competently seems to get more challenging by the minute.

But the payoff for optimized cloud operations (CloudOps) across hybrid, multicloud environments is enormous. When the plan, build, run life cycle is successfully implemented using DevSecOps and SRE practices on cloud workloads (applications, data and infrastructure), it's like getting a car that can upgrade while moving 100 miles an hour without sacrificing its performance or resiliency. Hitachi Application Reliability Services can transform your current landscape and get you there by assessing where you are at and then bringing the right people, process, and technology to your business.



### The Accelerating March to Cloud Operations

Even companies with well-operating legacy apps find that their applications and workloads cannot keep pace with the need for accelerated innovation to meet customer expectations. As a result, the stewards of modern applications are rapidly embracing a new operating model that allows them to take advantage of the flexibility of the cloud and adapt to the fact that many of the resources are no longer under their control.

Instead of owning and fully controlling assets, technology, and people, almost every aspect of a modern workload is operated under a shared responsibility model that covers cost, performance, security, and compliance across enterprises [IT, finance, line-of business (LOB) teams] and different cloud providers. When implemented properly using DevSecOps and SRE practices, this model expands automation and increases the speed of innovation without sacrificing stability, resiliency, or performance. Using the guidance of FinOps practices, cost reductions also can be achieved.

One of the barriers to a successful implementation of cloud operations is a mindset that sees practices such as DevSecOps and SRE as technical activities, not cloud workload management. To meet customer expectations and keep up with the competition, the ability to rapidly innovate must be built into the plan, build, deploy, run life cycle from top to bottom. CloudOps is an essential element to achieve progress. Considering CloudOps as technical backwater is a tragic mistake.

## What Is Site Reliability Engineering?

The DevSecOps process of integrating the entire process from development to operations has led to a new practice called SRE that first emerged at Google but has since broadened its scope to be implemented widely across the globe.

SRE focuses on looking at the collection of services that support distributed applications and workloads across multi and hybrid clouds. It uses metrics and automation to dramatically speed the process of identifying a problem and resolving it, helping increase resiliency for the applications, data and infrastructure. **As a result with SRE, IT teams can achieve:**

- **Better** visibility into customer needs utilizing metrics from production aided by 360-degree observability.
- **Increased** development velocity and innovation based on achievable reliability objectives.
- **Improved** incident response through automated incident management and remediation.
- **Sustained** expansion of automation and standardization.

## The Process for Creating Mature Cloud Operations.

### **With Hitachi Application Reliability Services you Get Your Cloud, Your Way.**

The good news is that there is a path to CloudOps that can achieve the optimization that most companies are seeking with respect to their cloud applications and workloads. CloudOps breaks silos and reduces the trade-off between speed, cost, and quality because the architecture and processes were designed to do just that. Core to CloudOps is the implementation of new design principles along with DevSecOps and SRE practices that support rapid innovation while maintaining high performance and stability.

**At Hitachi, redefining CloudOps is bringing the innovations of DevSecOps and SRE practices closer together and coalescing them around three core principles:**

### **Design for Reliability**

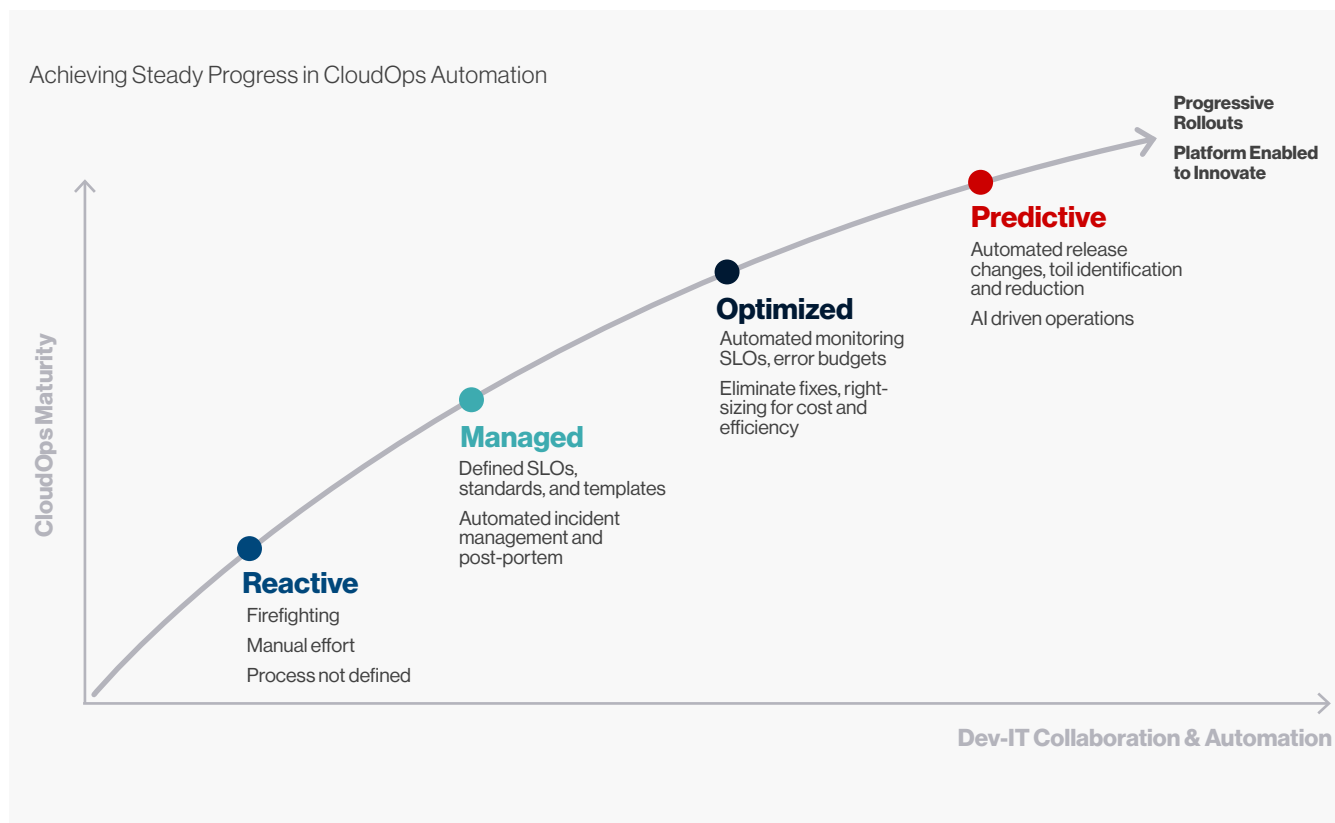
Designing for reliability means combining a variety of practices and integrating them so that companies achieve a new, and dramatically higher level of agility, compliance, resilience, scalability, and reliability, while preserving the ability to change and manage costs. For example, agility is designed in by expanding service level objectives and indicators (SLOs and SLIs), improving service level agreements (SLAs), and systematically attacking toil, while also improving development and service management practices in an environment of expanded visibility.

### Design for Cost

Designing for cost allows companies to reduce the tradeoff between cost, quality, and agility, by applying a FinOps framework. The framework allows companies to constantly gain the advantage of controlling costs by expanding the visibility of where the spend happens, operating with control to squeeze out waste, and reducing risk using automation, monitoring, and alerts. In short, FinOps replaces the protection that used to come from procurement departments with analytics and code.

### Run To Optimize

Running to optimize allows you to achieve higher levels of observability and automation that dramatically improve incident response. The operations environment is instrumented exhaustively, and incident response is automated, eventually evolving to become far more proactive and preventive. At the highest level, AIOps is introduced to find patterns of defects that can be found once but fixed everywhere. The ultimate goal is to move closer to autonomous monitoring, management, and operations.



Hitachi Reliability Application Services enable companies to progress from lower to higher states of cloud operations maturity. By designing reliability, cost reductions, and workload optimization into the plan, build, run life cycle, you will progress up the maturity levels from a reactive level characterized by firefighting, manual effort, and ill-defined processes, to a managed level, defined by standard SLOs and automated incident management. From there, you can further evolve to an optimized level, defined by automated monitoring of SLOs and rightsizing for cost and efficiency. Finally, you will advance to a predictive level, characterized by automated release management, toil reduction, prevention, and AI-driven operations.

## The Rewards of CloudOps: Automation, Innovation, and Predictive Operations.

Hitachi can help you design new cloud operations and development processes that reduce the tradeoffs between agility, reliability, and cost. In doing this, you get your cloud, your way, using any of the large public clouds from Microsoft Azure to Amazon Web Services (AWS).

Companies working with us can achieve:

**35%**

reduction in the total cost of operations

**30%**

improvement in productivity

**15%**

improved operational efficiency

**60%**

reduced risk

**360-degree**

observability

## Design for Reliability & Cost. Run to Optimize.

Hitachi Application Reliability Services provide fully automated management of all workloads running in the cloud in various forms, including hybrid, multicloud, and distributed. We help you set up reliable, data and KPI-driven always-on operations to enable anywhere, anytime business — future-proofing your cloud strategy.

The portfolio of capabilities under the Hitachi Application Reliability Services umbrella supports cloud and application modernization, software development, cloud operations, security, and compliance. Increase the flexibility, availability, accessibility, and efficiency of cloud services while also boosting business agility. Onboard new workloads faster, achieve economies of scale, and massively expand the scope of automation in your IT distributed cloud environments.

We have done upwards of **1,000 Cloud Migrations**

We have obtained more than **1,000 Hyperscaler Technology Certifications**

We have a team of over **4,000 Full Stack Cloud Engineers**

Ready to help.

## WE ARE HITACHI VANTARA

Hitachi Vantara solves digital challenges by guiding you from what's now to what's next. Our unmatched industrial and digital capabilities benefit both business and society.

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Design, build, run and operate your cloud workloads with confidence to establish an always-on business.

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