

Maximize Your Investment and Realize the True Potential of Cloud via Continuous Innovation

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Organizations need modern ways to manage their workloads in today's complex cloud environments.

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Businesses today face rising reliability, security, and cost issues due to the siloed nature of their approaches to development and operations. Specifically, dealing with infrastructure, applications, and data separately leads to management difficulties in modern complex hybrid and multi-cloud environments. Compounding matters, many businesses lack the talent and skills to support these environments.

As such, businesses need to adopt a more modern cloud management operating model to drive reliability, optimize cloud costs, and ensure the high availability of cloud application workloads.

Innovate to ensure faster go-to-market strategies

The widespread use of microservices, cloud instances, multi-cloud deployments, and API-based applications create many interdependencies in modern workloads, any of which can impact an application's performance or security.

In such environments, SREs and security operations teams using the standard tools and techniques employed in their on-premises environments quickly become overwhelmed with alerts, logs, and traces from multiple disparate systems that all generate data that theoretically can help identify the root cause of a problem.

With the world relying on digital apps and services every second of every day, businesses face harsh consequences for downtime, poor performance, or security incidents.

Downtime is disastrous for a company's reputation as it can cause consumer perception to tumble, decreasing sales and hindering long-term growth. If an application or digital service is down, a business loses immediate revenue from that specific engagement. The dollar value can be staggering. Major online sites, ranging from Target to Amazon, experience between \$10,000 to \$220,000 per minute revenue loss during downtime, based on [online revenue metrics calculations](#). Moreover, a company could lose customers forever if they quickly find comparable offerings from a competitor.

Simply having services up and running is not enough; they must be responsive. Poor performance irritates customers and leads to bad results. For example, in past studies, [Amazon found](#) that a 100-millisecond latency increase costs them 1% in sales. [Akamai found](#) that a 100-millisecond delay in website load time can lower conversion rates by 7%. [Google found](#) that when a page load time increases to three seconds from one second, the bounce probability increases by more than 30%.

These metrics are amplified today, having an even greater impact as users spend so much more time online and more business services are delivered digitally.

The longer an outage or performance incident goes untreated, the greater the damage. Patience is not a virtue many users have when dealing with businesses today. The tolerance for outages and slow-responding apps is very low.

As such, businesses must get serious about their technology's availability and performance. Most modern companies have their development and operations (DevOps) and site reliability engineering (SRE) teams that work to keep systems running at peak performance. These jobs are critical, considering incidents are inevitable, especially in today's ever more complex and sometimes more fragile IT environments. But, while traditional teams work to *fix* incidents and outages after they occur, modern teams must prevent these issues from happening in the first place.

Complexity masks costs

The complexity of modern cloud environments also impacts costs. Cloud spending is rising as businesses move more and more of their data, applications, and infrastructure to the cloud. And that spending is growing rapidly. Unfortunately, many businesses have little visibility into that spending. The major providers all offer tools to help track costs. But they are typically focused on that provider's services and associated spending. And many tools do not tightly integrate into existing budgeting and forecasting solutions. So, businesses have difficulty tying spending back to specific departments, groups, and projects.

Many businesses are now turning to FinOps for help. Intel defines FinOps as "a management practice that promotes shared responsibility for an organization's cloud computing infrastructure and costs." And the [FinOps Foundation](#) says it is "an evolving cloud financial management discipline and cultural

practice that enables organizations to get maximum business value by helping engineering, finance, technology, and business teams to collaborate on data-driven spending decisions.”

Whatever the definition, the FinOps Foundation, in its [State of FinOps 2022 report](#), found that Global 2000 companies are adopting FinOps. But just like the problems addressing uptime and reliability, businesses are overwhelmed with tools and data in their FinOps efforts. The FinOps Foundation found that many businesses rely on a mix of native tooling provided by AWS, Azure, and Google Cloud, as well as home-grown and third-party tools, **with an average of 3.7 tools being used per business.**

Teaming with a technology partner

Modern cloud workloads require modern IT and cloud operating models that leverage automation, orchestration, and monitoring tools to optimize resource utilization and minimize downtime, all while managing costs.

However, managing the complexity of modern cloud environments takes a variety of tools, knowledge, and skill sets. Many businesses do not have the expertise or experience to do the job. And in organizations with the right people and skills, there simply may not be enough time for them to do the job. Or their time may be better spent on other tasks vital to the organization.

As a result, many businesses are looking for help. Enter the Hitachi Application Reliability Centers (HARC).

HARC is Hitachi Digital Services` comprehensive, integrated portfolio of cloud and application professional and managed services offerings designed to help businesses address the complexity of modern cloud application environments.

HARC seeks to improve uptime to ensure uninterrupted service for today’s always-on world. And it builds in reliability and security from the start. Such an approach is essential these days. Many companies moved to the cloud expecting to eliminate the technical debt of their legacy systems and infrastructures. Unfortunately, they found that their rush to build and deploy cloud-based apps simply introduced new forms of technical debt.

Complementing its work in addressing uptime and reliability, HARC focuses on cost. Specifically, it seeks to help businesses save on cloud costs.

How does HARC deliver results in these areas? Its advisory and consulting services help businesses design, build, and operate modern cloud architecture, while managed services ensure cloud applications and workloads run reliably at scale and on budget. HARC applies reliability, cost reductions, and “always-on” workload optimization into every phase of cloud operations over its entire lifecycle, from planning to building to running workloads.

HARC enables businesses to move from reactive to predictive operations by combining the right development and operational tools and processes. HARC also helps businesses, assisted by purpose-built AI-driven automation tools and processes, to move to a state of cloud operational maturity.

A final word

HARC helps organizations build and manage an “always-on,” reliable, secure, and cost-optimized cloud, application, and data workloads, accelerating their time to market, maximizing their investments, and realizing the true potential of the cloud through continuous innovation.



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