

Oil and gas giant achieves millions in savings with Red Hat

Reducing cloud costs while scaling critical applications

A global oil and gas company was looking to reduce its cloud infrastructure costs and scale critical applications to deliver millions in savings. Building on a strong technological relationship, as an early adopter of Red Hat® OpenShift® 3 in 2016 and migrating to Red Hat OpenShift Service on AWS (classic) in 2022, the company was looking to continue the evolution of its IT environments.

Specifically, it wanted to migrate business-critical trading and shipping applications to Red Hat OpenShift Service on AWS Hosted Control Planes to achieve this cost reduction, while mitigating any risks associated with the migration.

The company also needed to remove barriers to infrastructure scaling for a critical fleet optimization application to increase transportation savings, accelerate its broader technology roadmap, and improve its teams' ways of working. However, the platform faced competition from internally developed solutions, meaning the new architecture needed to prove its superior maturity, support model, and agility for developing features.

Implementing a fresh architecture with GitOps frameworks

Red Hat Consulting helped the company to accelerate the migration, build new internal skills, and deploy a fresh architecture with a Platform-as-a-Product (PaaS) implementation.

By implementing cutting-edge GitOps frameworks and customized observability suites, Red Hat ensured that the company could easily manage its infrastructure and applications from a central point.

Adopting a PaaS methodology

Red Hat Consulting implemented Red Hat OpenShift Service on AWS Hosted Control Planes using a PaaS approach, which treats an internal platform as a product with its own lifecycle, user base, and roadmap. By launching a minimum viable product first, the team was able to iteratively add new features to meet the specific needs of the company's developers.

Beyond just the technical implementation, Red Hat Consulting shifted organizational mindsets toward a DevOps culture, evolving the company's platform team into a highly cross-functional group that collaboratively develops, tests, and releases changes.

Transforming CI/CD and configuration with GitOps

To improve configuration management, Red Hat demonstrated a GitOps-driven approach based on Red Hat OpenShift Pipelines and Red Hat OpenShift GitOps. The team built a proof of concept (PoC) using Tekton and ArgoCD to potentially replace Jenkins for continuous integration and continuous delivery (CI/CD).

The new workflow automatically deploys changes to lower environments and test clusters to validate behaviors before releasing them to production. It completely eliminates configuration redundancy by managing the entire platform configuration within a single central repository.

Upgrading observability and resource optimization

During the engagement, the company decided to move away from the Splunk services previously used by the Red Hat OpenShift Service on AWS Hosted Control Planes clusters. Red Hat Consulting integrated the clusters with an external Grafana suite, granting application teams the ability to inspect workloads, set optimal limits, view application metrics, and build custom dashboards.

Red Hat also built a PoC to demonstrate autoscaling capabilities, automatically generating nodes for on-demand workloads and removing them when tasks are complete. As a result, technical debt was reduced, and compute resources were highly optimized.

Driving business value and agility

The successful migration has generated measurable and substantial impacts for the company's operations. It successfully met its target of reducing cloud costs by 6% for 2025, saving approximately US\$400K. Furthermore, Red Hat OpenShift Service on AWS Hosted Control Planes provided application teams with a cost efficiency of between 46% and 76%.

Crucially, the new scalable platform allowed the company to significantly enhance its MALIN application, which optimizes shipping routes for the global fleet. The team can now run larger, faster optimization cycles, yielding tens of millions of dollars in savings each year.

The company's deployment agility also grew significantly, as it can now build a complete Red Hat OpenShift Service on AWS Hosted Control Planes cluster, including Day 2 configurations, in just 30 minutes.

Other key outcomes include:

- ▶ Releases are also more frequent. Developers can now add features in small iterations and release them regularly; a change can potentially be made and rolled out the same day.
- ▶ GitOps allows the platform team to manage the estate centrally, improving observability.
- ▶ GitOps safeguards system robustness. Changes are automatically deployed to lower environments first, then to the test clusters, where automation validates the configuration and the behavior of the changes in a test environment.
- ▶ The solution is fully scalable. Deploying a new cluster is simply a matter of adding it to a Git file and running the playbook.
- ▶ Technical debt is reduced with the optimization of computing resources. Workloads only request the resources they need.

Looking ahead: expansion and modernization

Following the successful production rollout across its applications, the company is now looking to expand Red Hat OpenShift Service on AWS Hosted Control Planes into all areas of its business, moving away from Amazon Elastic Kubernetes Service.

To this end, Red Hat Consulting has outlined a platform development roadmap for the company to continue this evolution. Upcoming quarterly initiatives include using Konveyor AI for application modernization and adopting Amazon's Karpenter for advanced autoscaling.

Explore a path to fully optimized cloud infrastructure

To discover how Red Hat OpenShift Service on AWS Hosted Control Planes can help your organization reduce cloud costs, enhance developer agility, and establish a scalable GitOps framework, visit the [Red Hat OpenShift product page](#).



About Red Hat

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers develop cloud-native applications, integrate existing and new IT applications, and automate and manage complex environments. [A trusted adviser to the Fortune 500](#), Red Hat provides [award-winning](#) support, training, and consulting services that bring the benefits of open innovation to any industry. Red Hat is a connective hub in a global network of enterprises, partners, and communities, helping organizations grow, transform, and prepare for the digital future.

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