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A unified hybrid cloud helps an aviation training company deliver new flight experiences faster

Developers now use a common platform to build, test, and deliver simulation training and operations software that helps keep air travel safe.



CIO

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Challenge

CAE is the world leader in aviation training and simulation, serving 135,000 pilots each year and managing in-flight services for 15,000 flights daily — about one flight every five seconds. The company's mission is to make air travel safer through technology, training, and immersive simulation.

As CAE expanded from hardware-based simulators to digital training and flight operations software, its IT environment grew increasingly complex. Developers were building and deploying applications across multiple cloud providers, on-premises systems, and edge devices embedded in simulators. Each environment required unique configurations, creating silos that slowed releases and added costs.

To keep pace with industry demand and support real-time, data-driven aviation experiences, CAE needed to simplify how software was developed and deployed across its hybrid multicloud environment. The team wanted a unified foundation that would let developers focus on addressing customer needs faster, rather than worrying about infrastructure.

Solution

CAE first adopted cloud platforms to gain flexibility through an infrastructure-as-code approach. But when new business needs required running workloads on-premises and closer to edge devices, the company needed a common platform that worked seamlessly across every environment — from the cloud to simulators.

Why CAE chose Red Hat's unified hybrid cloud platform

- **Uncompromising trust:** Enterprise reliability and security engineered for mission-critical, high-availability workloads
- **One platform, any location:** Seamless compatibility across all major clouds, private data centers, and specialized edge systems
- **Operational simplicity:** Automation and management tools that radically simplify complex, global infrastructure operations
- **Expert acceleration:** Dedicated strategic guidance and support from Red Hat Services

ABOUT CAE

CAE is a global leader in training for civil aviation, defense, and healthcare. Headquartered in Montreal, Quebec, Canada, the company employs more than 13,000 people worldwide and trains approximately 135,000 pilots annually. CAE's mission is to provide immersive simulators and comprehensive flight services to make air travel safer and more efficient by helping aviation professionals build and maintain the skills they need to perform with confidence.



Working with Red Hat Services, CAE established a unified environment that enforces consistency and automation at every stage of the application lifecycle.

Centralized governance: [Red Hat® Advanced Cluster Management](#) and [Advanced Cluster Security](#) delivers unified visibility and control across 12 distinct OpenShift clusters in seven global regions, ensuring consistent security and policy enforcement worldwide.

Massive scale automation: [Red Hat® Enterprise Linux®](#) and the [Red Hat® Ansible® Automation Platform](#) simplified and standardized infrastructure management across nearly 2,000 servers, freeing up developer time for innovation, not maintenance.

The results: A foundation for global innovation

The final solution is a single platform that connects and unifies teams across CAE's global operations. It has not only streamlined workflows but also accelerated software development from start to finish. The company now runs multiple managed cloud environments that can scale instantly to meet fluctuating market demand. Crucially, zero-latency performance is maintained through on-premises OpenShift clusters dedicated to resource-intensive workloads like flight simulators and high-fidelity training systems.

“With a standardized approach to coding, deployment, and operations, our engineers and developers can focus on creating innovative solutions to real-world problems, rather than managing infrastructure and security.”

— **Jean-François Gamache,**
Chief Information Officer, CAE

The business benefits of using Red Hat

CAE's developers now work within a unified hybrid multicloud environment that speeds delivery, improves reliability, and frees them to focus on creating value for customers.

Greater developer efficiency: Before OpenShift, engineers spent significant time managing complex environments. With self-service access, reusable templates, and automated continuous integration and continuous delivery (CI/CD) pipelines, teams can now move from concept to production faster and focus their energy on creating new tools for pilots, instructors, and airlines.

Simplified operations and stronger security: CAE has gained greater visibility across its global development environment, making it easier to manage workloads and maintain security standards. Automated policies now help teams detect and fix vulnerabilities earlier in development, resolving issues up to 12 times as fast. Consistent processes and centralized management have also improved efficiency and simplified compliance across systems.

Lower costs and a foundation for future growth: Standardizing and automating across the hybrid cloud have reduced infrastructure costs and operational overhead while providing CAE a scalable platform for long-term innovation. Developers can build once and deploy anywhere, bringing agility to new product development.

The platform also positions CAE to easily integrate new capabilities and technologies, such as artificial intelligence, augmented reality, virtual reality, and data analytics.

CAE is continuing to work with Red Hat as it plans for the future to continue to enhance simulator operations and deliver more immersive, connected training experiences.