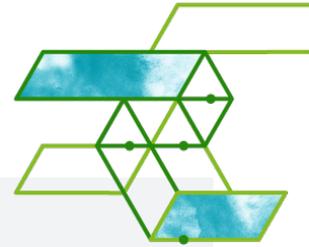


# Efficiency. Performance. Security.



How the State of Washington teamed with Deloitte to move to a Red Hat footprint within 100 days

The State of Washington Health Benefits Exchange (the Exchange) was faced with an aging application gateway product for application programming interfaces (API) management. Earmarked by the manufacturer as legacy and no longer supported, the current API management system offered limited support of modern API security and access control, and no support for the developer portal, version control, API monetization, or billing. The Exchange determined it was time to modernize and select a new product.

Deloitte has been working with the Exchange as a systems integrator since 2012, so the organization trusted Deloitte to manage the evaluation process and make valuable recommendations on how to resolve the challenges they were facing.

Together, we evaluated several platforms with a focus on IT modernization. Ultimately, the Exchange wanted a new platform that would give them flexibility and performance while reducing costs and increasing efficiency.

## Our approach

Deloitte is committed to a continuous improvement approach: operate, innovate, and elevate. We evaluated several modern API gateway products on behalf of the Exchange. After reviewing the outcomes of several proofs of concept, the Exchange finalized on a solution using Red Hat 3scale API Management and Red Hat Fuse on Red Hat OpenShift Container Platform. The main driver for this decision was the cost efficiencies they would realize from Red Hat's lower subscription costs compared to other products. The container-based platform would also give them more exposure and the opportunity to modularize and architect the application to allow for microservices-based solutions in the future.

We started by introducing transformative technology methods and tools such as Agile development, DevOps, modularity, and microservices. These methodologies were defined, evaluated, approved, and implemented according to the Exchange's strategic goals, including cost savings and impact to the enterprise.

As a result, the state was able to recapture resources and focus on value-add initiatives that elevate the program. Performance and efficiency improvements included:

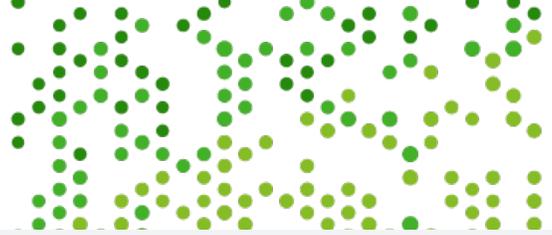
- **Cloud migration:** Deloitte recognized the need for migration to cloud services from an on-premises system infrastructure. We created a pool of resources, conducted multiple trainings, and launched a Cloud Center of Practice to support the migration. Deloitte successfully migrated the Health Insurance Exchange (HIX) operations to a cloud environment, reducing costs by eliminating unused servers and systems. Deloitte collaborated with the Exchange Infrastructure/Managed Services team in every step of the migration, working hand in hand to achieve the successful migration.
- **DevOps:** Deloitte uses automated processes like continuous integration/continuous development (CI/CD) for development and testing environments, reducing dependency on the infrastructure team and minimizing downtime on the environments.
- **Reporting and visibility:** By proactively monitoring the system and looking for abnormalities, Deloitte provided standardized reporting capabilities such as monitoring; data-driven analytic reports; and daily status reports on various processes like batches, web services, system health, and performance.

Deloitte implemented the solution in a two-phase approach and tested each phase on a functional and performance basis. Deloitte was also tasked with implementing the monitoring and logging solutions for Red Hat OpenShift using Prometheus, Grafana, and Kibana support tools.

Within 100 days from the selection decision, Deloitte completed production deployment to the new product. The cut over to the new API gateway was seamless, with minimal downtime and zero production issues.

## By the numbers

| TECHNOLOGY  | IMPLEMENTATIONS   | RESULTS  |
|---|---|--|
| <b>1</b> layer of software to connect developers to the API management system | <b>1</b> platform powered by Red Hat OpenShift to modernize API security and access control | <b>75</b> API services converted to containers and set to auto scale based on CPU load |
|   |   | <b>Lower</b> subscription costs with greater flexibility for the future                |
|   |   | <b>Zero</b> downtime API deployments   |
|   |   | <b>~20% increase</b> in API response time performance compared to the legacy product   |



## The impact

Adoption of a Red Hat OpenShift API Management gateway lays a strong foundation for modularizing other applications in the future.

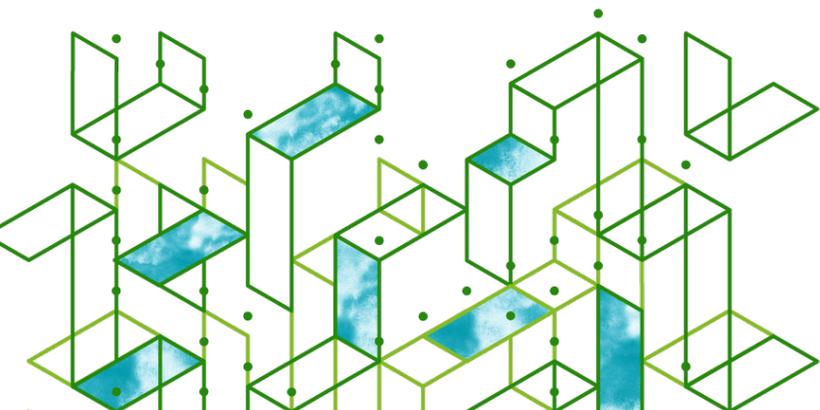
### Benefits include:

-  **Reduced costs** thanks to lower subscription fees
-  **Increased efficiency** with the ability to quickly spin up environments
-  **Zero deployment downtime** made possible with a container solution
-  **Improved performance** now that all API deployments can be moved to production without an impact
-  **Easy** implementation and management

Under the legacy platform, the Exchange experienced approximately two hours of downtime per release for API deployments. With the new Red Hat OpenShift platform, there is zero downtime for these deployments. The new gateway product offers higher security, and automatically scales containers up or down based on pre-defined rules in OpenShift.

## Why it worked

Deloitte brings together strong process expertise and a wealth of experience to help public sector agencies design and implement cutting-edge technologies. Our seasoned professionals have hands-on process automation experience, as well as the public sector knowledge necessary to understand the nuances of implementation within the context of state governments. Our approach is built on trust, transparency, and collaboration with measurable, predictable service delivery and uninterrupted, high-quality performance.



## Modernizing for a cloud-native world

Deloitte and Red Hat support business and technology leaders in delivering applications faster by modernizing their IT infrastructures. Using Red Hat's open source technology, our industry experience, and DevOps methodologies, we help drive the business integration, IT automation, and management needed to thrive in a cloud-native world. Together, we can help you accelerate innovation, reduce IT complexity, and deliver better business outcomes.

## Ready to see real results?

Then we should talk. We can help you better understand how Deloitte and Red Hat can help you transform and modernize development using Red Hat OpenShift technology.

### Sreshtha Wickramasinghe

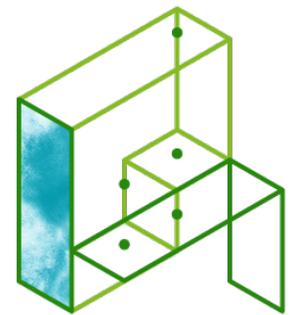
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