RAFAY

Dynamic Content for Interactive Applications

Challenge

The age of interactive web experiences, dynamic content and chatty applications is upon us. Organizations such as Netflix, Stitch Fix and PayPal use dynamic content today to create hyper-personalized interactive applications for their respective web experiences. And many other ecommerce, gaming and services organizations are following suit.

Interactive applications leverage a mix of static and dynamic content to engage users in a highly personalized manner. Static content is content that does not change and every web visitor sees the same files or images, typically using a Content Delivery Networks (CDN). Dynamic content delivery, however, is entirely different. Dynamic content is ever changing for each user, based on the user's location, time of day, device type, user preferences, etc. Additionally, an application or microservice may need to be executed to compute the dynamic content, and that computation today occurs in a data center of public cloud.

As applications become more interactive and chatty, more computation cycles are required to ensure the end user's experience is memorable. As such, the number of times responses need to be moved from the microservice execution location to the end user's device increases.

The state of the art for dynamic content acceleration relies on a "better than Internet" transport layer that ensures data can be transmitted from the microservice execution location to the end user's device in predictable time. But given today's solutions for dynamic content delivery, the number of back-and-forths adds latency, resulting in an overall poor application response time and user experience.

This 'speed versus interactive experience' dilemma has forced application owners to sacrifice application interactivity and dynamicity in favor of lower response times, as they lack the infrastructure and tools to deliver such superior end user experiences.

Solution

Rafay enables developers to improve application performance and deliver heretofore impossible, dynamic end user experiences - without any DevOps effort. Called the Programmable Edge, Rafay's platform delivers powerful, yet easy-to-use, APIs for deploying containerized workloads and microservices worldwide in minutes. Developers can leverage the Programmable Edge's network of multi-tenant clusters to enforce geography and latency specific workload policies based on application needs. The platform applies a variety of patent-pending algorithms to optimize microservice placement decisions based on configured policies. Additionally, the platform provides a suite of application lifecycle management tools to help developers deploy and run their applications across a number of edges.

By leveraging Rafay's Programmable Edge platform, developers can deploy specific microservices responsible for stitching together interactive and dynamic experiences closer to end users. As a result, developers are free to deliver a rich, interactive experience to end users while ensuring low application response times, leading to high engagement and happier users.

Benefits

- **On-Demand Expansion of Your Application's Global Footprint:** All traffic from endpoints is handled by your containerized microservices, which are dynamically placed close to endpoints.

- **Highly Improved End User Experience – Globally:** Distributed API routing, global load balancing, end point authentication and policing ensure that end users experience a consistently high performing application.

- **Developer-Friendly Application Lifecycle Management Tools:** A suite of application life cycle features empower developers to deploy microservices to the large number of edge clusters without worrying about internally developing code and artifact deployment, log aggregation, and a variety of other tools.

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