SPEEDSCALE

How Nylas earned the trust of its largest customer.

Nylas

The pioneer and leading provider of productivity infrastructure solutions for modern software.

Nylas is a fast-growing SaaS technology vendor that helps companies synchronize email, calendar, contacts and other productivity data across thousands of accounts. With more companies working from home, their product usage has spiked, and they are building a next-generation platform to handle additional use cases and scale. Over 26,000 developers use Nylas to send over 1 billion API requests per day to providers such as Gmail, Microsoft Exchange, Outlook.com, Yahoo! and more.

They have recently had the happy problem of onboarding larger customers running higher integration loads than they had previously encountered. After discovering Speedscale, David Ting, SVP of Engineering, made the strategic decision to implement Traffic Replay to help ensure uptime and stability. Speedscale fulfills the need of ensuring performance parity in their migration to Kubernetes, as well as allow for fast iteration and tuning on their high-throughput API's.

Using Speedscale, Nylas was able to improve account synchronization performance by 30x in a few months.

Challenge

Nylas is undergoing a migration from an existing monolith application into smaller services, from EC2 onto Kubernetes. This was needed to accelerate release velocity, as well as provide the option to let customers deploy Nylas software on-prem. While they gain flexibility on how code can be built and deployed, this approach brings its own set of challenges:

- Each service team iterates independently, thus dependencies and connections grow
- To maximize microservice advantages, applications require big rewrites
- While Kubernetes is elastic and self-heals, benchmarking individual APIs is difficult
- Third-party services like Office365 and Google Apps are outside of their control
- Maintaining ongoing business, release schedules and application quality during a shift in architecture is difficult

"Speedscale is a game changing capability that enables large architectural upgrades with quality. Traffic replay is high coverage and fast."

David Ting, VP, Engineering, Nylas

Solution

While moving from EC2 to Kubernetes, Speedscale's traffic replay framework provides an easy-to-use interface for observing traffic and orchestrating/automating replays. By observing API's, not only does Speedscale generate traffic replays, but mocks of critical dependencies as well. Within minutes, Speedscale is able to examine and ingest all of the inbound and outbound API calls across their service architecture. An initial set of recorded transactions can be expanded to represent 10K email accounts, and made available in a single container.

Nylas has further plans to utilize Speedscale to test performance gains of different CPU architectures, API designs, and of course, confirm performance parity as the migration from monolith to Kubernetes continues.

Why Speedscale

Nylas' requirements are for an easy-to-use platform that supports their unique environment: Kubernetes, third-party APIs with integrated TLS security and authentication, and an ability to record traffic and replay at scale. Having tried GoReplay, Nylas understands the frequency and changing data requirements are beyond the scope of what the open source tool is capable of.
With Speedscale, observing API traffic, generating snapshots/mocks and replaying traffic is easily done through the dashboard and manifest files. Snapshot summaries and replay readouts are available during and after execution. Perhaps most importantly, orchestration of replay containers is handled by a kubernetes operator and command-line, for integration with CI tools and repeatable execution.

Get Started

Understand latency, throughput, headroom, and errors -- before you release! The best part? You don't have to write any scripts or talk to anyone!

To learn more and request
a demo, visit www.speedscale.com.

Benefits

Speedscale provides many benefits, but chief among them is the ability to mock 3rd party endpoints at a scale unavailable anywhere else but production. With the availability of Office365 and Google Workplace mocks, the teams can rapidly iterate and validate at production volumes, with new versions of the sync, syncback, api and dashboard services. This also removes the need to create volumes of test data, as Speedscale orchestrates the dependencies and values for repeatable scenarios.

The capability to shift-performance-left was imperative to meet customer expectations and do so in a short timeframe. Using Speedscale, Nylas was able to improve account synchronization performance by 30x within 3 months.

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