News Reader App Delivers Content Quickly by Building a Mobile Back End on Google App Engine

pulse

At a Glance

What they wanted to do

• Leverage a powerful app-building platform to optimize a news reader application and deliver content quickly to iPads, iPhones, Androids and other mobile devices
• Test and roll out new features quickly
• Allow for automatic scalability to accommodate rapid user growth

What they did

• Developed a back end for the application in just a day using Google App Engine
• Introduced new features quickly by testing development versions of the app alongside existing versions
• Took advantage of Google App Engine's caching features to speed delivery of data and images

What they accomplished

• Achieved a 70-fold increase in users in about a year and a half
• Created a highly acclaimed app that was named to the Apple App Store Hall of Fame and was chosen as one of the few pre-loaded apps on Amazon's Kindle Fire tablet
• Avoided hiring two additional engineers and using a costly content delivery network to distribute news

Organization

Pulse, a startup based in Palo Alto, Calif., could have fallen victim to its own success if it hadn't used Google App Engine to handle fast-rising demand for its popular news reader application. The move helped improve customer service by speeding content delivery and allowed the fast, efficient rollout of new features. The app ultimately earned a coveted spot in the Apple App Store Hall of Fame.

Challenge

The Pulse application was a near-instant success when it launched for the iPad in May 2010. Users flocked to the app, which allows browsing and reading of stories from more than 300 news sources. Within a few months, the app had been downloaded hundreds of thousands of times and was the top paid iPad app in the Apple App Store.

As Pulse began offering a free version of the app on a range of devices, including iPhones and Androids, it needed a powerful platform to speed content delivery and regularly roll out new features. Greg Bayer, Vice President of Platforms at Pulse, knew the platform had to be highly scalable to accommodate the growing number of users. He also wanted to minimize the time his team spent managing the system.

Solution

Bayer considered a few cloud-based platforms but quickly selected Google App Engine in September 2010. "There weren't other options that would do as much," he says. "It allowed us to not get bogged down with work that was secondary to our product."

Bayer and his team were able to get the basic back-end structure running within a day. They also found it easy to add new features, since App Engine allows for testing development versions of an app without interfering with user activities.

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> —Greg Bayer, Vice President of Platforms, Pulse

"We try to release new features every two weeks. Google App Engine has made it easy to do that," Bayer says. "It's helped us shortcut all the work that normally has to go into testing and deployment."

About Google App Engine

Google App Engine enables businesses to build and host web apps on the same systems that power Google applications. It offers fast development and deployment, effortless scalability and simple administration, with no need to worry about hardware, patches or backups.

For more information, visit
www.google.com/enterprise/appengine/

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—*Greg Bayer, Vice President of Platforms, Pulse*

Bayer relies heavily on App Engine's auto-scaling capability to handle daily traffic fluctuations. Rich caching features such as the Memcache help speed content delivery to mobile devices, while the Datastore, which houses the application data, scales up effortlessly.

"As we've grown, Google App Engine has scaled with us," Bayer says. "We've been able to scale to many orders of magnitude without having to re-architect our systems."

Results

Pulse has expanded its user base from 200,000 to more than 14 million with Google App Engine. The app continues to receive consistently high user ratings, which Bayer attributes partly to the speed of content delivery and the ease with which he and his team can add new features.

Pulse made headlines in 2011 when it was selected as one of the few preloaded apps on Amazon's Kindle Fire tablet. More than 1 million new users downloaded the app on Christmas Day alone. Remarkably, the day went without a hitch. "Without Google App Engine, we wouldn't have been able to deal with that kind of a spike," Bayer says.

The service also helps Pulse save money. Bayer estimates he would have needed two additional engineers to host the app in-house – a cost of around $200,000 per year. The company is also economizing by using App Engine's caching system, which helps speed up load times. Using a traditional content delivery network for the same purpose could cost twice as much, according to Bayer.

The biggest benefit? Google App Engine has allowed Bayer and his team to focus on improving the Pulse app rather than on managing infrastructure. "We don't even see 99% of the things that we would have had to manage without App Engine," he says. "If a server goes down, we don't know about it. We're able to rely on Google to take care of it."