

Bēhance™

Creative Work Flourishes in Rackspace Hybrid Cloud

Behance leverages an array of Rackspace technologies to deliver the world's leading portfolio platform.

Behance is the world's leading online platform for showcasing and discovering creative work. The site allows creative professionals to upload work to online portfolios, which others can find and browse through an array of discovery features. Since 2007, Behance's design-centric approach has attracted more than a million users and now generates 100 million page views per month.

Behance was acquired by Adobe in December of 2012, a move that heralded even more prodigious expansion. Chris Henry, head of technology at Behance, says, "As we become more and more successful, we need to be able to scale. We need to be able to grow our infrastructure and continue to iterate and evolve." A combination of Rackspace hybrid architecture, managed services, and automated provisioning allows them to deploy the right infrastructure for their company's changing needs.

COMING TO HYBRID

Behance first considered adding cloud to its dedicated servers as a way to speed up one

of its service offerings. Henry explains, "We were having problems processing images. It's one of the most important things that we do, and the one physical server we had that was dedicated to it was totally overrun. It was one of those moments where we knew we had to act quickly, otherwise we were going to be dead in the water for hours or days."

"We had already kind of set up the hybrid environment—we had the F5 load balancer,

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Chris Henry
Head of Technology, Behance

AT-A-GLANCE

CUSTOMER'S BUSINESS:

Behance is the world's leading online platform for showcasing and discovering creative work.

CHALLENGES:

Behance needed a hybrid infrastructure that could keep pace with its rapid growth.

RACKSPACE® SOLUTION:

Rackspace Hosting, RackConnect, Rackspace Cloud Servers, Rackspace Private Cloud

BUSINESS OUTCOME:

Building in the Rackspace Hybrid Cloud allows Behance to deliver speedy image processing, run real-time activity feeds, and store massive amounts of media.

we had a cloud account—and it was at that moment where we said, we need to be able to get servers to do this right now," he continues. An F5 distributes load across both dedicated and cloud servers, making additional computing resources available in minutes. "We realized that this kind of infrastructure was going to work, because once we started bringing those servers up and adding them to the application, things improved immediately. Our users were able to process images faster, and it was also more reliable because when one server had an issue, the other servers picked it up."

"We had three or four physical servers at that time, and we added two or three Cloud Servers to begin with," Henry says. "As we realized it was working, we started adding more. Over the past few years, we've grown to having 80 physical devices and more than 170 cloud servers on the Rackspace Public Cloud." A combination of managed services and automated provisioning allows them to stay on top of their infrastructure as it grows. Henry explains, "What we discovered was

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that you could automate all of the provisioning of servers, either via scripts or via tools like Chef or RightScale. So once we built out a server, we were able to figure out all the steps that we needed to take and continually reuse those scripts.”

Behance is also beginning to use Rackspace Private Cloud, powered by OpenStack®. Henry explains, “We’re starting to work with OpenStack a lot, and we’re really enjoying working with it. We want to take the flexibility of having things that are in the public cloud and combine it with our own physical hardware, so we can choose the underlying hardware, yet still have the flexibility to be able to spin up a dozen VMs if we need to. We’re taking away all of the classic limitations of cloud, getting all the benefits of great hardware, and coupling them with the convenience of working in a cloud-type environment.”

ALIGNING WORKLOADS WITH BEST-FIT RESOURCES

What began as a way to speed up image processing has since allowed Behance to create a complex architecture to handle a variety of tasks. Henry explains, “The really cool thing about the hybrid infrastructure that we have is that we have choices. Our databases absolutely need custom hardware, they need SSDs, they need custom CPUs, and we need to make sure that our disks are configured in the proper RAID arrays. We’re able to tweak things at that level, which isn’t always possible in the cloud.”

“On the flipside,” he continues, “if we want 50 servers to process images, cloud is a great fit. You have as much CPU as you need at your fingertips when you need it. We really kind of have the best of both worlds, and with RackConnect, we have only a few milliseconds of latency between the two environments. It really is a great fit for someone like us who’s doing a lot of image processing and very intense data processing all at the same time.”

Asked if he thinks a cloud-only or dedicated-only solution could deliver the same results, Henry says, “Having one but not the other doesn’t always make sense. If we were just on the physical side, it would likely be too expensive. If we were just on the cloud, we probably wouldn’t get the performance we need.”

MIXING DATABASES

Behance runs a standard LAMP stack for their application, and MySQL is supplemented by MongoDB for database services. Their hybrid architecture means that these databases can work in tandem despite running in distinct environments. Henry says, “With MySQL, we had

a lot of great resources on the Rackspace side. We had the Rackspace database administration team and access to hardware choices that we didn’t have in the cloud, so we run all of that stuff on the physical side. For denormalized things, real-time feeds and things of that nature, we use MongoDB.”

“MongoDB required us to add and remove things as the cluster grew,” he continues. “We needed to add shards, and doing that in a physical environment is much more difficult and definitely more expensive. You need to actually either provision servers ahead of time or you need to have the lead time to do careful forecasting. The cloud is a really good fit for that, because if you become successful overnight, you can spin up those servers that you need to handle the load.”

Behance also leverages hybrid cloud architecture for storage and image services. Network Attached Storage from Isilon handles customer image uploads, while Rackspace Cloud Block Storage provides the backend for their MongoDB clusters. The combination supports millions of objects, nearly 80 file systems, and consumes over 11 terabytes of high-performance SSD storage.

FANATICAL SUPPORT®

Throughout their growth, Behance has found Rackspace to be an indispensable complement to their business. Henry says, “When the team was first formed, there were only two developers and we really had no idea how to run a server or manage infrastructure. We arrived at Rackspace because they had the best service and people willing to teach us how to do these things, and as we’ve grown, that same relationship has scaled.”

“As we are getting to the point where we need terabytes of storage, people are helping us figure that out,” he continues. “As we get to the point where we need an entire cluster of servers just to process images, they’re helping us and suggesting ways that we can do it and build it.”

Rackspace has allowed Behance’s team to remain small and efficient. “Rackspace is an extension of our team, and the reason we’ve been as successful as we have is because we’ve been able to focus on building a great product and not focus on building infrastructure,” Henry says. “There are always going to be people who do things better than us, and Rackspace is a perfect example of that. They do infrastructure extremely well, and they support us and enable us to build a great product.”

ALL BACKED BY FANATICAL SUPPORT.

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