



## DISCOVERY EDUCATION SELECTS NGINX



### Delivering Optimized Digital Experiences with NGINX Solutions

#### Situation

With an expensive upgrade to its hardware-based load balancer on the horizon, [Discovery Education](#) was motivated to investigate alternatives. Additionally, growth in its domestic customer base and expansion into international markets made it imperative to find a solution for managing site traffic that could scale out quickly on demand.

Discovery Education had to make a choice: upgrade with its current hardware-based load balancing provider, which would require significant costs and involve longer deployment times, or investigate alternatives that would be more compatible with their business needs. This is when Discovery Education determined that a forward-leaning software-based product like NGINX Plus could enable the company's need to deliver faster web experiences at scale while exceeding the expectations of its users.

After resolving this first issue of managing increased load and global locations, Discovery Education then determined it also needed to modernize its infrastructure for streaming video to customers. As the business grew, the company required tools that would scale with increased traffic and deliver content to a variety of devices, and they looked to NGINX Media Server, which is designed specifically for video delivery requirements.



*“With NGINX Plus, we quickly saw big wins in our ability to manage and distribute site traffic. As a result, it was easy to continue with our plan to do even more with Nginx solutions. We continue to expand our load balancing deployments, and now use NGINX Media Server to deliver 99.9% of our video streaming. NGINX will be a critical part of our infrastructure for the foreseeable future.”*

Ramin Surya, Director of Systems and Development Operations at Discovery Education

## Solution

Discovery Education first turned to NGINX Plus, the Nginx commercial offering, for benefits such as proper test environments, evenly distributed and normalized traffic, and 24/7 on-the-spot support from the Nginx team, which includes access to the core developers. The company implemented multiple instances of NGINX Plus to replace hardware load balancers across two data centers, taking advantage of NGINX Plus' SSL termination, load balancing, and on-the-fly content compression capabilities, as well as the technology's ability to manipulate HTTP headers more simply than other vendors.

After the success of the initial NGINX Plus deployment for load balancing, Discovery Education looked to Nginx to revamp its aging web infrastructure for streaming media. The company deployed NGINX Media Server, which enabled seamless streaming of video content to its growing customer base, at scale, and across all devices.

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## Results

### Greater Stability & Flexibility

With NGINX Plus, Discovery Education has been able to distribute, manage, and normalize traffic, resulting in more stable website performance, even while the amount of traffic is on the rise. Matt Blaha, Sr. Systems Engineer at Discovery Education, explains, "We use rate limiting heavily to normalize traffic spikes that could potentially impact our customers. We've alleviated that problem now that we're using NGINX Plus. We plan to expand our deployment of NGINX Plus as a result of its ability to deliver the type of premium web experience our users have come to expect."

NGINX Plus also allows Discovery Education to correct failures quickly and reliably. "In the past when faced with a failure, we had to wait for replacement hardware and hope it arrived before another failure," says Blaha. "Now with NGINX, we have much more flexibility. If a machine fails we can quickly and seamlessly replace it because our reliance on hardware has been significantly reduced."

### Cost Effectiveness

With most development teams, load balancers are deployed in non-production environments, like QA and staging, to simulate real-world scenarios. With a hardware-based provider, Discovery Education had to provision or purchase hardware load balancing products for each of the different environments. Now NGINX Plus provides Discovery Education with the ability to enhance customer experience at a fraction of the cost. As a software-based load balancer, NGINX Plus offers rich features and can run on commodity hardware.

### About Discovery Education

Discovery Education transforms classrooms, empowers teachers, and captivates students by leading the way in providing high-quality, dynamic, digital content from Discovery Communications' family of networks to school districts large and small, rural and suburban and everything in between. Whether you're looking for a digital media library service, implementation to help you transition your classrooms to a 21st century environment, or to completely replace textbooks with digital resources, Discovery Education offers a continuum of solutions to meet your school district's specific needs.



"We had an expensive upgrade coming up with our current load balancing provider, so we looked at alternatives," said Blaha. "We found that we could do more with NGINX Plus and do it at a quarter of the cost at most."

### Seamless Integration

The transition to NGINX Plus was smooth and predictable. Discovery Education has a modern infrastructure that includes a multitude of open source components and tool sets, including a Puppet-based workflow. Nginx is able to support all components and processes of Discovery Education's web ecosystem. "One of the main reasons we chose NGINX Plus was compatibility with our systems—it's easy to fit into our Puppet-based workflow," added Blaha. "NGINX Plus integrates into our open source systems, allowing our infrastructure to be more flexible and in line with our development processes."

Success with NGINX Plus features has led Discovery Education to expand the scope of its partnership with Nginx. "Our open source engineers at Discovery Education had planned to run as much behind NGINX Plus as we could," says Ramin Surya, Director of Systems and Development Operations at Discovery Education. "Since video in our online textbooks is core to our business and key to our customers, we wanted to make sure the site transition went smoothly before switching to NGINX Plus to also stream our video. After seeing load balancing with NGINX Plus achieve stability and consistency, I'm happy to say that we are now doing even more with the solution, including using a specialized version of NGINX Plus for 99.9% of our video streaming."



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Matt Blaha, Sr. Systems Engineer at Discovery Education

### Around-the-Clock Support

When any company partners with a technology provider, there is always concern about how easy it is to correctly configure and deploy the solution. Discovery Education found the Nginx support team hands-on and responsive from the start. Not only does the Nginx support team operate 24/7, it includes core developers who can provide deep insight and clarity into challenges. For example, Discovery Education also wanted to deliver video content with NGINX Plus, being familiar with its rock-solid media server capabilities, and the Nginx support team facilitated the switch.

"On the business side, access to the core development team helped ease fears about who would be responsible if issues arise," says Surya. "The Nginx support team is very knowledgeable and responsive in assisting our engineering team."

As expansion continues internationally, the Nginx support team will help ensure Discovery Education provides the highest-quality experiences across the globe.

### Conclusion

The management team at Discovery Education recognized that NGINX Plus was the best choice on the market to accelerate traffic generated by the company's growing client base and to support the company in multiple technology layers of its business. The seamless transition to NGINX Plus and NGINX Media Server has provided Discovery Education with reliability, scale, and predictability, which reduce overhead costs and boost web performance and user experience.

To learn more about NGINX Plus, please visit [nginx.com](https://nginx.com).  
To speak with a representative, please call +1 800 915 9122 or email [nginx-inquiries@nginx.com](mailto:nginx-inquiries@nginx.com).