

Rosetta Stone Turns to Cedexis to Implement a Multi-CDN Strategy, Improving Performance for Users Worldwide



THE GOAL

Guarantee the fastest and most reliable digital download performance rates for Rosetta Stone users—wherever they are in the world.

THE SOLUTION

Switch from a single content delivery network (CDN) to a multi-CDN solution powered by Cedexis Openmix.

THE RESULTS

Rosetta Stone improves performance for over 60% of users worldwide on a daily basis and avoids more than 36 hours of global downtime per week.

How does a global leader of language, literacy, and brain training programs optimize content delivery for countless learners around the world? By adopting a multi-CDN solution. See the difference in performance Rosetta Stone's users experienced after the company switched to Cedexis.

Few educational content providers can compare their offerings to the breadth and depth of Rosetta Stone's programs and its user base. With a robust suite of language learning solutions available in over 30 languages, the company's innovative digital programs have driven positive learning outcomes for millions learners at home, in schools, in the workplace, and communities around the world for more than 25 years.

The company sells many of its programs through an online subscription model. Accordingly, the company hosts and delivers courseware—a lot of courseware. Users download hours of video, interactive lessons, instructions, and images—all continually revised and updated with changes in language and advances in technology. And because customers count on Rosetta Stone for fast, uninterrupted content in all time zones, all that content needs to arrive on devices far and wide without delay.

Taking note of its users' significant needs, the company recently partnered with performance optimization integration firm GlobalDots to switch from a single content delivery network (CDN) provider to a multi-CDN solution powered by Cedexis Openmix.

"We had been on a single, global CDN for 15 years but decided it would be prudent to adopt a multi-CDN vendor strategy, just as we use multiple partners for all elements of our IT infrastructure. No one is perfect 100% of the time, and the Internet is particularly susceptible to congestion and micro-outages."

Rosetta Stone Vice President of Information Technology Mark Moseley

Rosetta Stone's CDN transition started when the company's IT department made the decision to adopt a DevOps programming model. This agile management practice allows multinational organizations like Rosetta Stone to iterate on software and test updates quickly and efficiently. Altering a massive infrastructure necessitates fundamental operational shifts. It means rethinking established relationships, making difficult decisions, and setting new priorities.

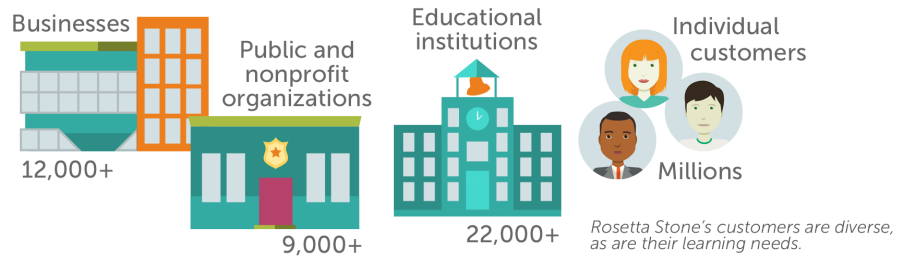
Who Is GlobalDots?

GlobalDots is the world's largest independent cloud and performance optimization integration partner. The company works with leading brands to solve their complex and sensitive data challenges. GlobalDots closely analyzes each client's operations to develop a customized solution that reduces cost, increases return on investment (ROI), and improves online quality of experience.

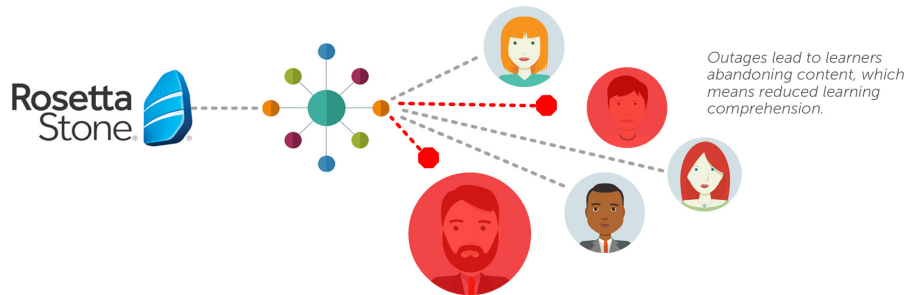
What Is a CDN Broker?

A CDN broker connects enterprise organizations like Rosetta Stone to traffic management providers. CDN brokers help each of their clients achieve the most cost-effective arrangement possible and understand the role that CDN service providers play in boosting performance.

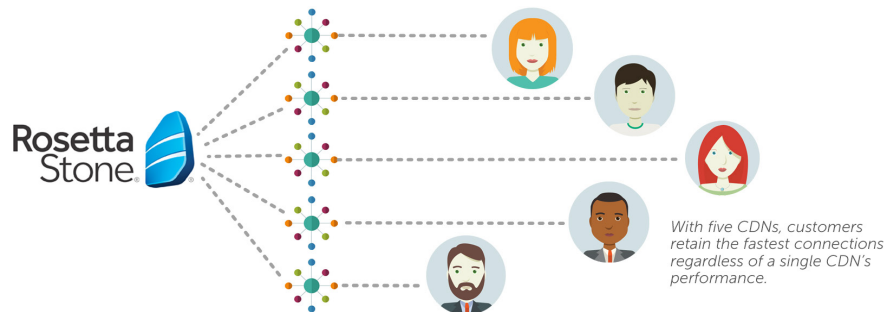
"Adopting a DevOps model led to a reevaluation of all elements of our content delivery strategy and a decision to utilize a highly automated and data drive multi-CDN strategy," said Rosetta Stone Vice President of Information Technology Mark Moseley. "We wanted a solution that leveraged real user monitoring (RUM) to continuously, and automatically, detect and react to occasional lapses in availability and unpredictable Internet congestion."



Lapses in availability are no trivial matter, especially for a company with over 12,000 corporate customers, over 22,000 institutional customers, and nearly 10,000 nonprofit and public sector customers—including police departments using Rosetta Stone to serve multilingual communities.



It isn't difficult to see how outages, however brief, can directly affect learning comprehension. On average, about 6% of viewers will abandon a video with every second it takes to buffer. Loading times lead to delays or lapses in understanding, which lead to errors in communication that—in a police officer's case—can put lives in danger.



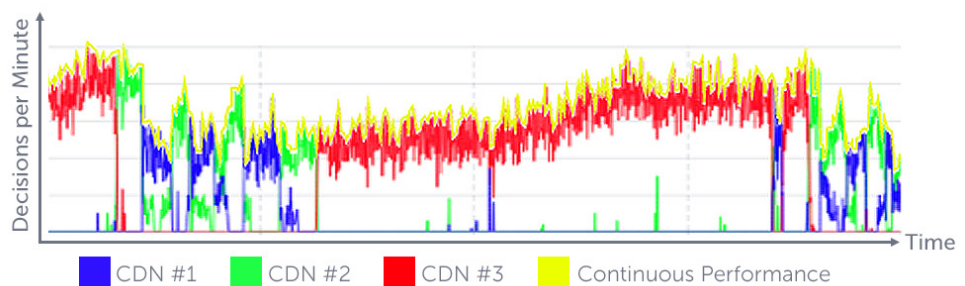
Employing five CDNs rather than single network allows Rosetta Stone to deliver hours of uninterrupted, in-depth multimedia content to learners around the world. As a result, users acquire competency, remember information, and achieve learning outcomes faster and better than ever before.

Rosetta Stone optimized its CDN solution with Cedexis Openmix, which monitors and scores multiple CDNs to dynamically connect customers to the fastest provider.

No CDN Is Built for the Entire World

As Moseley understands, no single CDN is immune from experiencing periods of downtime. Due to ISP, device, and peering failures at various points along the way, users regularly face outages that interrupt their use of the service. Providers do not always detect and reflect these outages. Location matters too; with a single CDN, customers in some regions may have fast downloads while other customers experience lag due to the hops and peering relationships between them and the closest point of presence.

Openmix Automatically Balances Load Between Providers to Continually Give Users the Best Performance



Cedexis Openmix makes a decision for clients requesting content from Rosetta Stone, choosing the best available CDN at that moment. In a world where micro-outages are the norm, a multi-CDN approach is necessary to ensure uninterrupted connections. Openmix transitions traffic between providers in light of performance changes. The highest-performing CDN can change as frequently as every few minutes.

Factor in a prodigious data center, and the case against a single CDN becomes even clearer. Rosetta Stone's DevOps journey led Moseley and his team to determine that they needed to carefully consider what could go wrong for the millions of users constantly connecting to the company's vast library of content.

"GlobalDots and Cedexis worked in unison to provide a powerful multi-CDN solution with ideal performance worldwide and a single rate for CDN services that met our budget. I really didn't expect this switch from 15 years with a single CDN over to Cedexis Openmix powering five 'new' CDNs to be so smooth!"

Rosetta Stone Vice President of Information Technology Mark Moseley

It didn't take long for Mosely and team to realize that a solution utilizing multiple CDNs could use real-time, real-user monitoring to automatically distribute the load across multiple CDN platforms. Rosetta Stone could take advantage of the ISP-level efficiencies offered by each CDN at any point in time to ensure optimum availability and performance for each customer. Leveraging multiple CDNs also made sense on a financial level, enabling both minimum commitment management and bursting avoidance programmatically.

Five Platforms Are Better than One

“We had been looking at ways to reduce our risks of a single point of failure with a single CDN and also improve our CDN costs. GlobalDots and Cedexis provided a solution for both that had the added advantage of dramatically improving the performance for our important online customers.”

Rosetta Stone Senior Director of Systems Operations George Hegedus

Once Rosetta Stone had resolved to switch from a single CDN to a multi-CDN implementation load balanced by Cedexis, the next step was implementing multiple networks. Although the company initially started with three CDNs, it soon added two more to the mix. GlobalDots’ ability to offer flat pricing for each CDN enabled Rosetta Stone to use the new solution to its full potential.

As it turned out, five networks were the necessary amount to ensure the fastest downloads. In setting up and testing connections using Cedexis Radar data, GlobalDots and Rosetta Stone found that no CDN was ever responsible for more than 40% of DNS decisions at any given time and that most had less than 20% of decisions overall. In other words, in accordance with their diverse locations and learning needs, Rosetta Stone’s customers also have diverse ideal connections.

More CDN Options, Less Wait

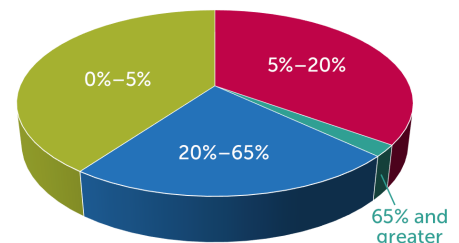
Cedexis Openmix makes it all possible. Operating in real time, Openmix is a global traffic management (GTM) system that optimizes content delivery for end users by routing connections to the fastest available CDN as changes in speed occur.

This arrangement has supercharged performance for hundreds of thousands of learners in 175 countries. Over the course of a single day, Cedexis Openmix is able to save Rosetta Stone’s users nearly 3.25 hours (11,623 seconds) of wait time.

Here’s a glimpse of how the new performance standards break down in an ordinary day:

- 11,623 seconds of user wait time avoided
- 5–20% performance improvement for 35% of users
- 65% or greater performance improvement for 2.5% of users
- 16% performance gain overall in the United States and Canada

Performance Improvements in a Single Day



After Rosetta Stone moved to the Cedexis Openmix model, performance improved by 5–20% for a third of users, while another portion of users experienced 65% better performance.

ABOUT ROSETTA STONE

Rosetta Stone Inc. is a global leader in language learning, literacy, and brain training software. The company's programs have transformed education outcomes for millions of learners individually as well as in schools, businesses, and government organizations around the world.

ABOUT CEDEXIS

Founded in 2009, Cedexis optimizes Web performance across data centers, content delivery networks (CDNs) and clouds, for companies that want to ensure 100% availability and extend their reach to new global markets.

ABOUT GLOBALDOTS

GlobalDots is the largest worldwide independent cloud and performance optimization integration partner. With more than 10 years in the acceleration business, GlobalDots has trained personnel to help clients achieve performance optimization, ROI boost, and cost reduction.

Delivering Education on Every Continent

"GlobalDots and Cedexis worked in unison to provide a powerful multi-CDN solution with ideal performance worldwide and a single rate for CDN services that met our budget," said Moseley. "I really didn't expect this switch from 15 years with a single CDN over to Cedexis Openmix powering five 'new' CDNs to be so smooth!" George Hegedus, senior director of systems operations at Rosetta Stone, added that apart from reducing risks, the new solution has "the added advantage of dramatically improving the performance for our important online customers."

The power of five CDNs allows Rosetta Stone to smoothly deliver the latest educational content to users on every continent. Customers can thereby learn faster and without the frustrations caused by interruptions and network unavailability. At a time when language competency is more important than ever, speed matters. Thanks to GlobalDots and Cedexis, Rosetta Stone can deliver its software to the entire world.



With deep experience in delivery networks and performance optimization, Cedexis is the global expert in multi-cloud and multi-CDN strategies. Today, over 1,000 media, retail, luxury and consumer brands count on Cedexis for 100% availability, optimal Web performance, flexibility and choice that drives revenue and lowers cost and risk.

Visit cedexis.com or email sales@cedexis.com.

Portland, Oregon
421 SW 6th Ave, Suite 700
Portland, OR 97204
+1 855 CEDEXIS (233-3947)

Paris, France
15-17 rue Vulpian
75013 Paris, France
+33 (0)1 79 755 253