}); http.HandleFunc("/status",func(w http.Respo else { fmt.Fprint(w, "INACTIVE"); }; return; case); type ControlNessage struct { Target string; Count int64; }; func ma **AKAMAI CUSTOMER STORY** for { select { case respChan := <- statusPol admin(cc chan ControlMessage, statusPollChannel c **Educational Testing Service** 10, 64); if err != nil { fmt.Fprintf(w, result { fmt.Fprint(w, "ACTIVE"); } else { fmt.Fprint(w, "INAC); type ControlMessage struct { Target string ETS calls upon Akamai to ensure the highest levels false;go admin(controlChannel, statusPollChannel); for { select { ca of site and application performance and security water leteChan: workerActive = status; }}}; func admin(cc chan ControlMes err := strconv.ParseInt(r.FormValue("count"), 10, 64); if err != html.EscapeString(r.FormValue("target")), count); }); h case result := <- reqChan: if result { fmt.Fprint(w, "ACTIVE"); } else</pre> "log"; "net/http"; "strconv"; "strings"; "time"); type ControlMessa workerActive := false;go admin(controlChannel, statusPollChanne <- workerCompleteChan: workerActive = status; }}; func a</pre> message issued for Target %s, count %d", html.EscapeString(r.FormValue("target (time.Second); select { case result := <- reqChan: if result { fmt.Fprint(w, "A</pre> "html"; "log"; "net/http"; "strconv"; "strings"; "time"); type make(chan chan bool); workerActive := false;go admin(controlChannel, st workerCompleteChan); case status := <- workerCompleteChan: workerActive = sta); r.ParseForm(); count, err := strconv.ParseInt(r.F "Control message issued for Target %s, count %d"

Evolving to keep pace with an increasingly online world

Founded in 1947, Educational Testing Service (ETS) is the world's largest private nonprofit educational testing and assessment organization. Its mission is to advance quality and equity in education across all people worldwide through its assessments. ETS develops, administers, and scores over 50 million tests annually in more than 180 countries.

Like so many other industries, the educational market has quickly moved from a paperand-pencil world to an online world. ETS keeps that at the forefront as it continually evolves the way it delivers, protects, and optimizes its website and applications. Those educational applications cover everything from test registration and test delivery to test management and online writing assessment.

According to Fred Manno, Business Technology Director for ETS, "Our presence is 100% online. While content delivery and performance were the main focus when we first started with Akamai years ago, security has become a high priority as it is for every organization with an online presence."

First ensuring optimal application performance

The applications ETS first offered over the web were housed in one data center on the East Coast. One of those — its online writing tool — had worked well across the United States. However, when the Clark County, Nevada, school district – one of the largest in the country - began using it, performance was not up to par. Page refreshes took twice as long for them compared with users on the East Coast, making the tool unacceptably slow.

Manno did his homework and discovered all the issues associated with internet latency, including how cross-country IP hops and the tactics telecom providers use to route traffic can slow application performance.



Educational Testing Service

!= nil { fmt.Fprintf(w, err.Error());

www.ets.org

Industry

Public Sector

Solutions

- Secure Internet Access Enterprise
- Web Application Protector
- Ion



After conducting his due diligence, Manno selected the Akamai Web Application Accelerator (WAA) service. Rather than open a data center on the West Coast, ETS took advantage of WAA to accelerate its web applications. This enabled ETS to save hundreds of thousands of dollars in new data center costs while also lowering the number of help desk calls by 90% and reducing the time staff spent monitoring network locations. Best of all, it boosted user adoption around the world.

Addressing the latest security concerns

Given these impressive results, it was only natural that Manno continued to turn to Akamai to address ETS's additional site and application needs. ETS deployed Akamai lon to intelligently optimize website and application performance according to the user's device type and network conditions.

As Manno explained, security has been the top issue in more recent years. Like other organizations online, ETS has seen an increase in security threats. To that end, ETS has adopted a number of Akamai solutions to mitigate attacks before they hit the organization's network.

These solutions include Kona Site Defender and Client Reputation, giving ETS a state-of-the-art, proprietary risk analysis engine to compute a score for every source IP address to identify malicious clients. Eventually, ETS upgraded to the Kona Site Defender, Akamai's proactive, fully managed security service.

"Because we can count on Akamai to manage Kona, our lean team is freed to focus on more pressing security issues," says Manno.

Benefiting from a long-term relationship

As Manno explains, ETS has turned repeatedly to Akamai not for a particular solution but because of the value of the relationship. "We view Akamai as a strategic, trusted partner. We meet regularly with Akamai's sales and technical staff to understand how Akamai solutions intersect with our needs. Because we can always count on clear communications grounded in integrity, we never hesitate to be early adopters of Akamai's newest solutions."

That was precisely how ETS came to use Secure Internet Access Enterprise. This solution is designed to enable ETS to ensure that users and devices can securely connect to the internet from anywhere, without exposing the organization to threats such as malware, ransomware phishing, and data exfiltration. In discussions with Akamai, Manno learned that Secure Internet Access Enterprise could be quickly and easily added to ETS's existing security tools with a simple DNS configuration change.

"We didn't realize Akamai could help resolve this issue, which is why it's invaluable to have such a close working relationship with Akamai. The company is continually developing and launching solutions to address the latest needs," says Manno.

Key impacts

- Saved hundreds of thousands of dollars in data center costs
- Reduced help desk calls by 90%
- Reduced the time staff spent monitoring network locations
- · Enhanced security posture
- Freed lean security staff to focus on pressing security issues
- Boosted user adoption around the world
- · Enabled global expansion



Because we can count on Akamai to manage Kona, our lean team is freed to focus on more pressing security issues.

Fred Manno

Business Technology Director, Educational Testing Service

Serving business needs and global expansion

While Akamai's services are invisible to ETS's business employees, they are well aware of the value. According to Manno, the business units understand that to ensure ETS's applications perform optimally and consistently in any state, they need to be served by Akamai. "The business units understand that our site and applications are always up, performing well, and withstanding security attacks. And they know that's due to Akamai," he continues.

To date, ETS has offloaded about 80% of its applications to the Akamai platform, enabling it to reduce infrastructure requirements. "This makes our life easier and lowers our costs, especially as we move our applications to the AWS cloud environment. We expect even more savings by offloading application hits from AWS to Akamai as we continue with our digital transformation," says Manno.

Akamai is also enabling ETS to confidently expand the overseas presence of its online writing tool and two new tests: TOEFL and TOEIC. "We deliver millions of these tests around the world via a variety of testing centers, and we cannot always be certain of the internet connectivity in those locations. Whether it's to enable registration for these tests or the actual taking of them, Akamai's edge performance and route optimization make a huge difference in the performance each end user sees," continues Manno.

ETS continues to explore how it can work with Akamai to take advantage of the Zero Trust security model, deploying Enterprise Application Access as part of its ongoing commitment to network security. "We appreciate how our long-term partnership with Akamai has enabled us to keep pace with the latest technologies and trends," concludes Manno.



We meet regularly with Akamai's sales and technical staff to understand how Akamai solutions intersect with our needs.

Fred Manno

Business Technology Director, **Educational Testing Service**



At ETS, we advance quality and equity in education for people worldwide by creating assessments based on rigorous research. ETS serves individuals, educational institutions, and government agencies by providing customized solutions for teacher certification, English language learning, and elementary, secondary and postsecondary education, and by conducting education research, analysis, and policy studies. Founded as a nonprofit in 1947, ETS develops, administers, and scores more than 50 million tests annually - including the TOEFL® and TOEIC® tests, the GRE® tests and The Praxis Series® assessments - in more than 180 countries, at over 9,000 locations worldwide: www.ets.org.

