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Unitas Global boosts user experience with help from Kentik

UNITAS GLOBAL
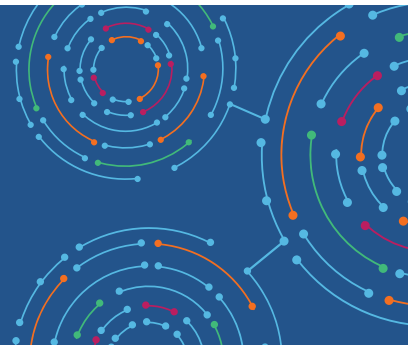
CATEGORY

- Cloud services provider

CHALLENGE

- Needed reliable internet connections to optimize user experience
- Needed to establish peering relationships to maximize cost-effectiveness
- Needed to protect customers from DDoS attacks

SOLUTION

- The Kentik platform delivers highly detailed insights to boost user experience

RESULTS

- Greater network performance and lower costs
- Outstanding customer experience
- Synthetic monitoring to identify and prevent potential performance issues
- Defense against DDoS attacks

Overview

Unitas Global operates the first worldwide network built specifically for cloud connectivity, linking over 35 million enterprise edge locations with thousands of networks and SaaS applications on every continent. To maintain reliability, maximize cost-effectiveness and deliver the best user experience, Unitas Global uses the Kentik Network Observability Cloud, including Kentik Synthetics, to understand all aspects of the performance of its complex global network infrastructure.

Situation

When Unitas Global was founded in 2011, the company focused on what many large enterprises needed at the time: dedicated hosting services to manage and optimize organizations' increasingly complex environments of enterprise applications, e-commerce, massive databases, and customer interactions. Unitas Global built a large and loyal customer base for such services, but needed change — and Unitas Global adapted.

"There was a rapidly increasing acceptance of the cloud among our customers, and that meant less demand for custom data center services and much greater emphasis on internet connectivity," recalls Grant Kirkwood, co-founder and CTO of Unitas Global. "That meant we had to pivot toward being more of a connectivity service provider."

Fortunately, Kirkwood and some other senior leaders at the company had backgrounds with telecommunication carriers and other relevant industries. So, they were able to effectively blend skills relevant to data center operations, edge access and long-haul communications.

"Our customers kept asking, 'How do we deal with all of this network stuff; how do we prepare for cloud access?'," Kirkwood says. "That led us down the path to where we are today: a very cloud-oriented connectivity service provider with its roots in last-mile access."
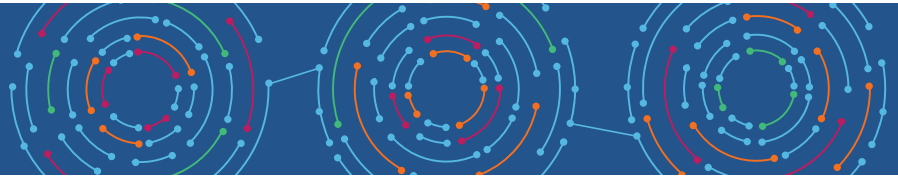
The move to a service provider business model meant significant changes in the infrastructure that Kirkwood and his team had to build out and manage.

"We built a different type of IP network; we're not trying to be a Tier 1 provider. Instead, we aggressively pursue open peering relationships that bypass the Tier 1's whenever possible, to improve performance and optimize costs."

The twin pillars of the Unitas Global connectivity service are: Unitas Nexus™, software that enables partners and enterprises to easily design, price and order IP and ethernet services from over 30 million edge locations in 85 countries; and Unitas Reach™, a backbone network with connections to hundreds of other networks and fiber access providers, including over 900 data centers and 30 million enterprise locations in 133 countries.
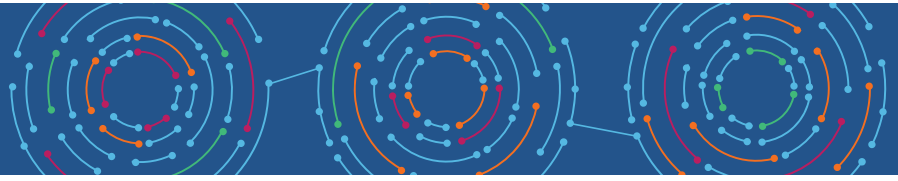
Solution

To meet its commitment to deliver the best possible experience for its customers, the Unitas Global operations team requires tools and processes for monitoring the performance of its complex, global network infrastructure.

A key element in managing this environment is the Kentik Network Observability Cloud, which delivers superior capabilities for monitoring performance and analyzing complex network traffic patterns.

The capabilities of Kentik were a perfect match for the evolving needs of Unitas Global, Kirkwood says. "Previously, we had the usual suite of network management systems, some commercial and some open-source. Under our old business model, we weren't doing a lot of flow analysis, performance monitoring or dealing with DDoS attacks. But as we evolved into more of a service provider, those capabilities became more important."

Kirkwood says Unitas Global uses Kentik for a wide variety of uses cases, including:

- Identifying the sources and destinations of traffic
- Characterizing the types of traffic customers are sending and receiving
- Monitoring the performance of key applications running on the network and continuously reporting network performance status to customers

> "With Kentik, we can measure and track the metrics that are most important to each customer and tailor our response and service accordingly."

- Identifying opportunities where direct peering connections can save money and improve performance for customers
- Understanding where network expansion and new connections will be needed to meet future demand

Results

> " Looking at data from Kentik, we can identify new interconnect points that will improve performance and lower costs. This is an area where Kentik has made a big difference. "

Kirkwood says Kentik's unmatched breadth of capabilities is important in meeting the differing needs of Unitas Global's diverse customer base, which includes leaders in such varied fields as mining, automobiles, software, financial services, genomics and social services. "The traffic patterns of our data-center and enterprise customers look very different from those of customers who are more service providers," he observes. "With Kentik, we can measure and track the metrics that are most important to each customer and tailor our response and service accordingly."

Greater performance and lower costs

One example of a customer with specialized needs is a large provider of internet access to multiple dwelling units (MDUs), such as college dormitories, apartment blocks and hotels. Kentik not only identifies the sources of traffic flowing into this customer's many sites (e.g., Netflix, Google, Facebook, etc.,) but also where those flows enter Unitas Global's backbone. "That's important to know because in a peering relationship, traffic exits at the point closest to the originator, and the more traffic that flows on our network the greater the cost and the higher the latency. Looking at data from Kentik, we can identify new interconnect points that will improve performance and lower costs. This is an area where Kentik has made a big difference."

> " Kentik is unique in its ability to provide a multi-modal defense to attacks. "

Another major issue with the customer with many MDUs is security. "In their college settings, a lot of students are playing video games, which are frequently the object of DDoS attacks," Kirkwood notes. "Kentik has given us the ability to spot these attacks right at the edge and alert the customer before they can spread onto a wider network and do more damage."

In some cases, a customer's network traffic spans multiple geographies with very different network characteristics — an environment in which Kentik
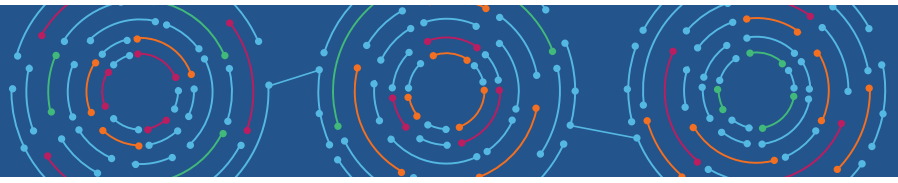
thrives. "Kentik is unique in its ability to provide a multi-modal defense to attacks," Kirkwood says, "and that has worked very well for us."

▌ Synthetic monitoring for far-reaching value

A vital element in the war against DDoS attacks is Kentik Synthetics, which adds autonomous, pervasive performance testing to the Kentik Network Observability Cloud.

Unitas Global has placed Kentik Synthetics agents in more than 40 of its points of presence (PoPs) around the globe in a mesh configuration. These agents continuously monitor the performance of the service and help produce reports for customers. One involves reports Unitas Global sends to its customers to track and verify performance against service-level agreements (SLAs).

Kentik Synthetics is also used to lessen the impact of DDoS attacks. When a malicious actor targets the network, Kentik will spot the increased latency and send alerts before the attack causes disruption. Data gathered by Kentik Synthetics about multiple attacks is used to refine procedures for recognizing and dealing with DDoS intrusions. "It's ongoing learning, and Kentik adds value every day," says Kirkwood.

> "We are committed to giving as much information to our customers as possible about network performance, and Kentik allows us to deliver on that promise."

Kentik Synthetics' network of agents contributes in other ways, as well. The agents gather data on critical metrics such as PoP-to-PoP latency, packet loss and jitter. That information is fed through Kentik's API into Unitas Global's Atlas performance-monitoring tool, which was developed to support the original hosting business. The results are made available to all customers. "We are committed to giving as much information to our customers as possible about network performance, and Kentik allows us to deliver on that promise," Kirkwood says.

Many enterprises, even ones with large IT staffs, gain previously unmined insights into network and application performance thanks to Kentik. "Deep packet inspection comes at a huge cost, so most organizations do not do it," Kirkwood says. "So, the granular information and analysis from Kentik provide insights they have never had before, such as details about which sources, destinations, and applications generate the most traffic. We just include that as part of our service, which customers see as hugely valuable."
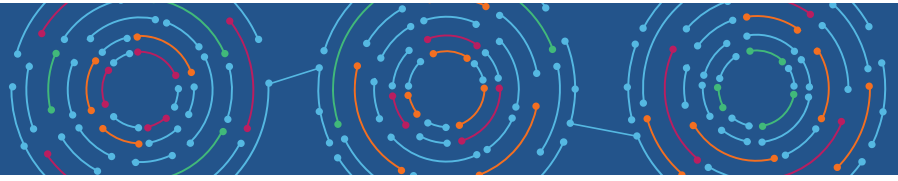
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Outstanding customer experience with the My Kentik Portal

The Kentik platform is integral to Unitas Global's role as a global provider of end-to-end connectivity solutions.

"What makes Kentik special is that running an IP network is part of their DNA, whereas for all the SD-WAN vendors, their knowledge stops at the edge of the cloud. Many times, they don't understand how peering and interconnect work on an internet-scale. Kentik does."

Many Unitas Global customers take advantage of the My Kentik Portal (MKP), which Unitas Global offers as part of its management console. "They really love it," Kirkwood reports. "And when we show MKP to prospective customers, they get very excited. They say the level of detail and clearly presented analysis are things they've never seen before when it comes to internet traffic."

Many companies are used to simply receiving a measurement of traffic volume. But with Kentik, Kirkwood says, "We give them all the details about the traffic – sources, destinations, characteristics, protocol makeup, etc."

Unitas Global customers benefit directly from Kentik, Kirkwood adds. "Many times, we have seen a customer whose business is growing rapidly but their transport solution is a fairly typical collection of multiple Tier 1 carriers who get blended upstream. Armed with detailed data from Kentik, we go in and talk to them about setting up direct interconnects that take the Tier 1 providers out of the equation. That means fewer hops, less latency and better performance."

One customer recorded a 30% increase in the performance of its internet access, which Kirkwood says was "solely due to the aggressive peering approach we take, which is powered by data and insights from Kentik."

Defense against DDoS attacks

The operations team at Unitas Global also benefits from the combination of rich detail and clearly presented analysis provided by Kentik. Managers like Kirkwood who have a background with carriers will know how to read SNMP monitors and spot an incipient DDoS attack, but that's not a skill many staff
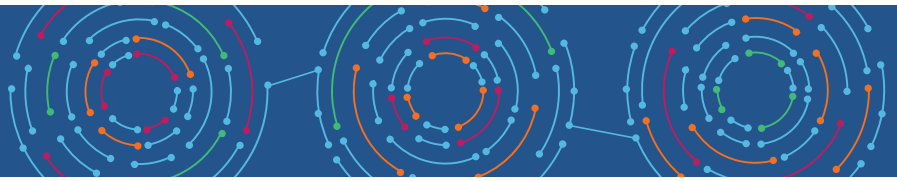
> **The best part of working with Kentik is the people. Anytime we have a question, everyone jumps in and helps out, which is awesome.**

in a network operations center (NOC) will have. For these technicians, "it's very valuable to have Kentik send an alert that says this particular customer is under attack from a specific direction. That's actionable information the NOC can act on immediately."

Key takeaways

"Everything we do is designed to deliver a better experience for our customers," Kirkwood says, "and Kentik plays a big part in that. We use Kentik all the time – for seeing where our traffic comes from and where it goes; understanding how the network can support the priorities of our customers; defending against DDoS attacks; and determining which interconnections will deliver the best performance at the lowest cost."

Above and beyond the capabilities of Kentik services, Kirkwood praises the people of Kentik. "The best part of working with Kentik is the people. Anytime we have a question, everyone jumps in and helps out, which is awesome."

ABOUT KENTIK | Kentik is the network observability company. Our platform is a must-have for the network front line, whether digital business, corporate IT, or service provider. Network and cloud professionals turn to the Kentik Network Observability Cloud to plan, run, and fix any network, relying on our infinite granularity, AI-driven insights, and ridiculously fast search. Kentik makes sense of network, cloud, host, and container flow, internet routing, performance tests, and network metrics. We show network pros what they need to know about their network performance, health, and security to make their business-critical services shine. Networks power the world's most valuable companies, and those companies trust Kentik. Market leaders like IBM, Box, and Zoom rely on Kentik for network observability. Visit us at **kentik.com** and follow us at **@kentikinc**.

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