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PenTeleData boosts customer experience and team efficiency with Kentik NMS

PenTeleData®

CATEGORY: Communications service provider: voice, video, data, internet, and managed IT services

CHALLENGE

- ▶ Time-consuming and homegrown NMS system of 20+ years
- ▶ Current in-market NMS offerings lack specific network monitoring needs

SOLUTION

- ▶ Kentik NMS for high-performance and modern network monitoring with built-in ISP-tailored monitoring capabilities

RESULTS

- ▶ Faster polling for optimized network performance and troubleshooting
- ▶ Increased network team efficiency and reduced MTTR
- ▶ Catalyst for tools consolidation of network flow and metrics monitoring in one platform

Background

PenTeleData (PTD) is a leading provider of voice, video, data, security, and internet services with more than 60 points of presence across Pennsylvania and New Jersey. As Pennsylvania's largest privately-owned fiber optic network, spanning nearly 10,000+ miles, PTD delivers a robust suite of cutting-edge connectivity and technology solutions to residential, educational, financial, government, healthcare, and commercial customers. With many critical community-anchor institutions relying on their fiber network and managed IT services, maintaining reliable and trustworthy connectivity services is PTD's core mission. PTD, in turn, has relied on Kentik's network observability since 2016 to fulfill its mission with best-in-class traffic analysis and, more recently, network monitoring.

The challenge

As a regional ISP (internet service provider), PTD has distinct network observability needs that typical network monitoring systems (NMS) built for the enterprise don't support. For example, ISPs need to monitor devices using MPLS and IGP protocols, and report to customers on downstream SLA-bound activity. Just as for enterprises, for ISPs, networking monitoring really matters to staying competitive. ISPs undergo constant pressure to serve more customers with higher performance and more reliable services without increasing the size of networking teams. They must continually improve service without increasing costs.

As a result, many NMS systems don't justify their cost to companies like ISPs that operate huge, complex networks with niche needs. Additionally, no two ISP networks look exactly the same – diverse SLAs, different routing protocols, suites of services offered, and multiple customer types all further complicate the task of serving ISP monitoring demands.

Given these requirements, PTD has always tailor-made its own NMS tools, but over the years, the downsides to this approach have multiplied. Like most companies, PTD can't devote infinite cycles to updating a homegrown monitoring system as software methodologies and networks evolve. By 2023, this left the network team ready to make some changes. They were unable to augment their NMS to monitor the aggressively modernizing network that makes PTD a market leader.

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"We've been monitoring our network with a 20-year-old system that's beyond its life expectancy. There is a lot more to do than write network monitoring software. If we can remove those cycles from our software development team, they can work on higher priority things in the pipeline," remarks Dylan Mendes, PTD's backbone engineering supervisor.

PTD is operating a next-generation network, and needed a flexible monitoring system that can accommodate their custom metrics and unique monitoring specifications without tasking the team with operations and customization.

Why Kentik?

Whether they run a high-scale, high-bandwidth Fortune 100 enterprise network, or a vast, complex distributed ISP network, network teams love Kentik because it allows them to quickly apply their expertise to challenging problems and understand how to act. For years, PTD has relied on the Kentik platform to deliver high-quality customer experiences, using the platform to investigate real-time traffic flows and mitigate DDoS attacks automatically. "We really loved Kentik from day one. It has always been good at presenting data and allowing us to manipulate and query it. That future is here already — you put forth a great product for looking at the metrics you're bringing in for us" says Mendes. Since his team already trusts the fast, flexible data visualization and analysis capabilities they get from Kentik, leveraging those same tools for network metrics is a no-brainer.

> "Everything we've given, we've gotten back tenfold from the Kentik team."

Given the monitoring flexibility and extensibility that ISPs demand, available market alternatives to homegrown solutions were slim before the release of Kentik NMS. "This is the first time we've seen a software company become interested in ISP network monitoring," remarks Dylan Mendes. A few solutions offer valuable features for service providers, but rigid compatibility requirements, such as the need to adopt outsourced

NOC services along with NMS, render those solutions costly or impractical. Other options include open source software, but these come with high TCO and drain engineering cycles with the burden of augmenting systems to meet requirements.

Continuing Kentik's ongoing commitment to developing top-tier network observability solutions for service providers as well as the enterprise, the Kentik NMS team took time to understand PTD's metrics, how their network works, and how they monitor it. Part of an early release program, this partnership helped shape the flexibility and extensibility that Kentik NMS delivers for complex and evolving network monitoring use cases, including flexible device support and custom metrics.

"Everything we've given, we've gotten back tenfold from the Kentik team. We want to bring our own devices, our own metrics, and our own endpoints into our NMS. That level of support is very important to us and other service providers. We have high confidence that this can be the network monitoring suite we have envisioned."

The solution

For PTD, a high-performance monitoring system means greater team efficiency and better customer experiences. Among the many benefits that have PTD excited about Kentik NMS are faster detection of network issues that allow the network team to act much more quickly to address issues.

> **"Another thing about Kentik that has always excited us is performance. We want to know when something's broken faster, so we can act on it faster."**

✓ Fast polling, powerful performance

Kentik offers PTD relief from an archaic system. Kentik NMS defaults to 1-minute polling intervals to provide fresh, detailed data that equips the team in real-time with a critical understanding of problems that put SLAs and revenue at risk. Kentik NMS delivers the faster alert detection the team has always wanted, so they can fix customer issues quickly.

More frequent data refreshes also aid in the detection and investigation of transient issues. With slower monitoring systems, problems that come and go within five or ten minutes show up as blips; the problem may impact customers, but the NMS won't alert the team or allow for later analysis in the case of recurrence.

Based on their previous experience with Kentik's reliable, SaaS-based observability, the PTD team knows they can expect the same from Kentik NMS. "Another thing about Kentik that has always excited us is performance," says Mendes. "We want to know when something's broken faster, so we can act on it faster."

✅ Cost-cutting efficiency

Thanks to its high performance, adding Kentik NMS to PTD's Kentik suite translates to cost-cutting efficiency gains:

1. **Reduced MTTR:** Kentik NMS performance gives the network team strong direction in identifying root causes. MTTR shrinks when the team knows where to look first.

2. **Central device management:** Kentik NMS offers one view into the health of every device, removing toilsome steps of logging into various devices to detect CPU, memory, or power supply issues.

3. **Smart acknowledgment:** Kentik NMS notifies other operators when a team member is investigating an alert, eliminating duplicate work.

4. **Zero maintenance:** Kentik NMS eliminates operational overhead for monitoring, empowering network teams to focus on higher-value projects that directly drive revenue.

5. **High-productivity integrations:** With minimal effort, Kentik NMS seamlessly integrates with ticketing and case management systems, plus apps like Microsoft Teams and Slack.

✅ Consolidated tools, correlated telemetry

PTD has long used Kentik's traffic flow analysis to not only understand root causes, but also plan capacity, and quickly evaluate partnership opportunities based on potential costs and ROI. Thanks to Kentik NMS, the team will gain a competitive advantage as they consolidate metrics and flow monitoring into one platform. Correlating traffic data to metrics offers a powerful edge that PTD is just beginning to explore as they begin using NMS to monitor events like routing protocol changes:

> **"We can do things like correlate a routing change alert to a shift in traffic."**

"We can do things like correlate a routing change alert to a shift in traffic. Seeing a change in routing is one thing, but that doesn't tell you how the traffic is moving. You're not going to get that data without flow. That's just one use case for using the two products together."

✅ Turning telemetry into revenue

To add to that competitive edge, PTD's network team will continue to drive customer experience improvements in the future by leveraging Kentik's command of its telemetry.

To deliver similar insights based on real-time network metrics, PTD plans to add shared links to Kentik NMS queries and visualizations to their account portal. Mendes recognizes that "it's already built into Kentik." Kentik makes it easy to give partner companies and customers a window into the metrics and traffic for their assets, so they can view, monitor, alert on, and explore them any time of day with the world-class UX of the Kentik platform.

Key takeaways

The PTD team needs fast insights into network traffic and metrics to continue elevating their performance and reliability in response to customer demand. The Kentik Network Observability Platform delivers. With Kentik NMS as part of their Kentik portfolio, they can consolidate network metrics and flow monitoring into the same platform, reduce MTTR, and put telemetry to work for their customers and across the organization. This next-generation monitoring helps them to improve service quality without increasing costs or growing the team.

> "Kentik is helping us improve network operations efficiency and speed up MTTR. Their SaaS platform is reducing NMS's total cost of ownership by consolidating traffic analysis and metrics monitoring. Beyond that, we're excited about Kentik AI's ability to harness our telemetry to compress and automate network investigations."
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> — Brian Mengel, CTO, PenTeleData