



eBook

# Network Monitoring Technology

Achieving IT Operational Excellence

VIAXI

Operating enterprise networks is getting more and more difficult by the day. Businesses rely on their networks to share information that drives productivity, revenue, partnerships, and customer loyalty. However, many still wrestle internally with positioning networks as a mission-critical necessity.

If a network isn't performing at the level required, then it won't be able to deliver on the expectations the business sets for itself or its clients. However, a network isn't a static technology; enterprises must evaluate their network strategies, including if and when to outsource, to meet their evolving demands. New hardware may be required to provide horizontal growth, replace outdated technology, or adopt cloud strategies. Add to this the always-evolving world of cybersecurity threats where new kinds of attacks are created every day and must be planned for.

Networks are the foundation of an enterprise's technology arsenal, whether on-premise or outsourced. The challenge is how to maintain operational excellence while also delivering business innovation through their IT solutions. Your enterprise needs to innovate, but it can't sacrifice basic functionality of mission-critical technologies, applications or business models to do so.



Today, about **75 percent of CIOs** are struggling to balance operational excellence and business innovation.<sup>1</sup> These are major responsibilities for IT teams and finding a solution that addresses them can be a daunting task. So how do you meet both of these requirements? It's a process that can be broken down into three main components:

1

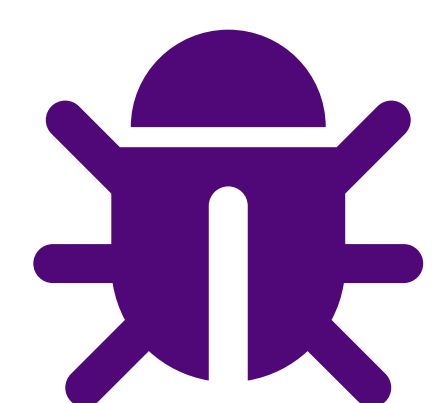
Successfully manage daily operations. This includes meeting user and client expectations and ensuring that your networks and applications are performing well.

2

Mitigate risks that come from planned changes and unexpected events. IT service downtime is not just frustrating to deal with; it's also costly.

3

Solve performance and security issues quickly and efficiently. If a vital service isn't performing correctly, it can take a long time to fix.



40% of problems are detected and reported by end users rather than the IT department

Source: EMA Research



The average cost of IT service downtime per hour is \$336,000

Source: Gartner



One-third of system performance problems take longer than a month to solve

Source: Forrester Research

If left unaddressed, these challenges can cost an organization in multiple ways. Not only do they strain budget and resources, but you also lose credibility with end-users and upper management. That's why a network performance and threat monitoring solution is critical for enterprises to ensure operational excellence.

This eBook explores how network monitoring tools, such as **VIAVI Observer**, can help enterprises meet their expected operational levels while also giving them room to design cutting-edge solutions to business problems. Observer is a comprehensive network performance monitoring and diagnostics solution that grants businesses the power to maintain peak performance for the network and applications it supports.



## Managing Daily Operations: Network Performance from the End-User Perspective

A business can't ignore managing daily operations to focus on integrating technologies or attempting to innovate. Maintaining network functionality is a critical part of keeping an enterprise running smoothly. Just like any IT service, a network that isn't working properly is a huge drain on your business.

Enterprises rely on networks to achieve success with their digital processes. Since many mission-critical workflows are now done using network-dependent software, IT departments must manage and maintain a network at all times to ensure daily operations can continue.

It isn't enough for a network to be operational anymore; it needs to meet the dynamic demands of enterprises and IT departments while also satisfying end-users. Monitoring from the end-user perspective allows IT teams to prioritize their efforts, manage their time more effectively, and address issues that are actually visible to and impacting users.

Websites and applications are perfect examples. A company website is often the first interaction an end-user has with your company. If the website is performing slowly, there will be a disconnect between your enterprise and the user. Reducing latency and ensuring sufficient bandwidth between your network receiving a request for the website and delivering that request will help improve the end-user experience. Focusing on the end-user experience means analyzing metrics that drive business value, including revenue, productivity, and customer loyalty.





## Mitigating Risks: Dealing with Network Downtime

Nobody is happy when a critical IT service goes down. Your employees want to get work done and your customers expect responsive transactions. If a service becomes unavailable, it causes frustration in addition to cutting productivity. Every IT department's worst nightmare is a sudden loss of service availability. It's a pain because it not only adds work to their schedule – work that could potentially last several hours, days, or even weeks to completely fix – but it also means complaints from all corners of the enterprise asking what's going on.

However, every IT worker knows that you can't guarantee 100 percent uptime for your network. Even if you reduce unexpected downtime, you will need to manually turn off the network at some point to install new hardware, migrate servers, or rollout a new or updated application. Your IT department will anticipate times it has to shut off the network in advance, so it has time to prepare for that downtime. What happens, though, when you need to extend that downtime for another hour – or five?



### Quick Stats

The average cost of IT service downtime per hour is **\$336,000** Source: Gartner

While attempting to prevent downtime on your network is crucial, another step in dealing with downtime is having a plan and proper tools for when downtime happens. Your enterprise needs to identify and respond to problems as they happen, applying quick but effective remedies to fix the issue.

The root cause of a problem remains an issue for network operations. With networks that are distributed, virtualized or even outside your view, it can be extremely difficult to replicate and isolate issues without the right data and monitoring solution.



## Solving Network Issues: Network Security and Performance Troubleshooting

Unfortunately for businesses and users, the world of cybersecurity threats is constantly evolving. New threats are being developed all the time, even as cybersecurity solution providers attempt to counteract them. As such, the need to maintain security for all your IT solutions, including your network and application, is undeniable.

Data and information stored on a network is often business-critical and/or sensitive. Businesses must protect that information. This protection must cover both outside threats attempting to invade the network and internal security gaps.

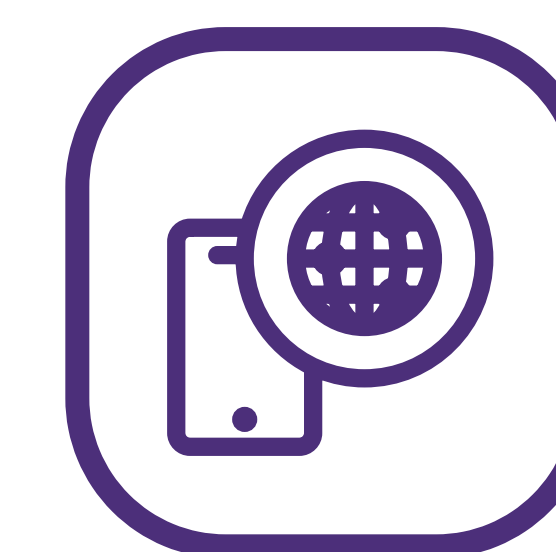
### Types of security threats



External Hackers



Unsecured Devices



Misused Network

Security threats don't just affect your enterprise's safety; they can also be a major influence on a network's performance. If your infrastructure isn't secure, harmful actors may enter your network and target specific functions or devices. If these areas become unavailable, performance will inevitably suffer as a result. A telltale sign of threats is unusual data usage. Spikes in traffic or bandwidth usage might indicate that malware has entered your network and is draining resources.

When a security breach occurs, your team needs to be ready. Using a monitoring tool to detect abnormal behavior on your network, you can determine where the traffic is coming from and the level of impact, allowing network and security teams to quickly collaborate and more effectively resolve the issue.



## VIAVI Observer Platform: Enterprise Network Life Cycle Management

The VIAVI Observer Platform is a suite of tools that helps companies manage daily network and security operations, mitigate risk from planned change and unexpected events, and solve performance and security issues faster. It helps enterprises meet business goals and overcome challenges across the entire network life cycle, including deploying technologies, managing current resources, solving service anomalies, or optimizing asset usage.

There are three main products that make up the Observer Platform.

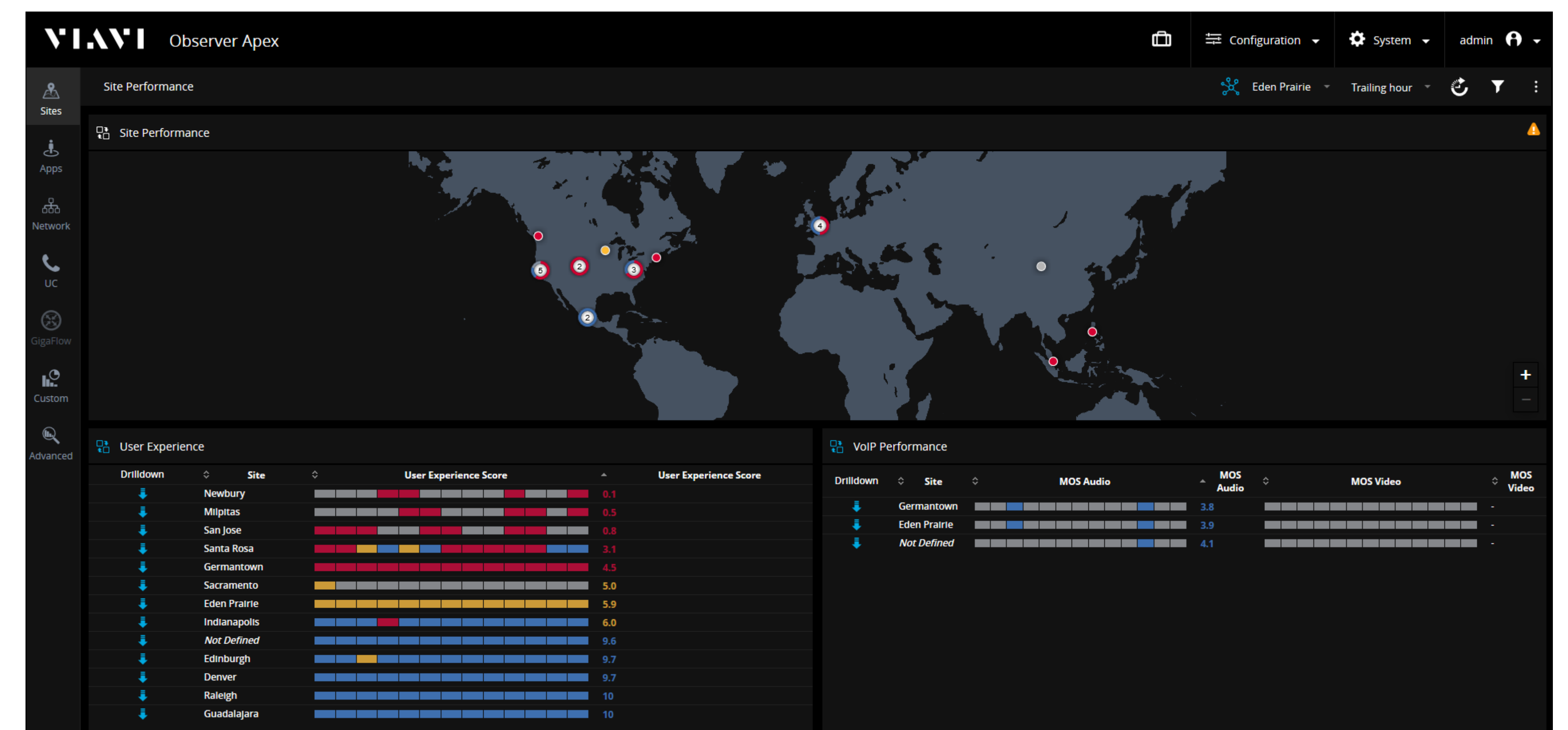
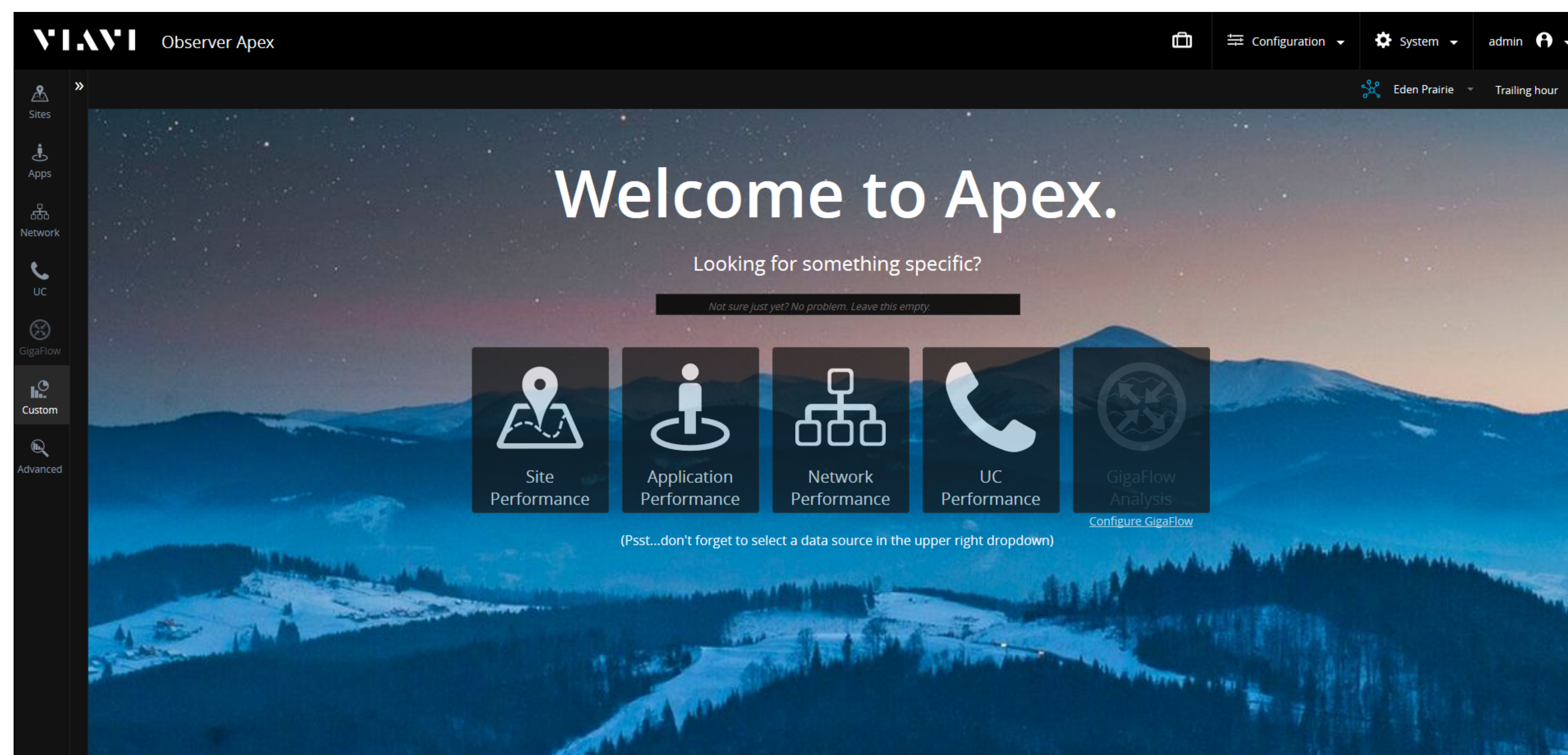
Observer Apex

Observer GigaStor

Observer GigaFlow



## Observer Apex



Observer Apex provides a unified point for network performance management through machine learning powered end-user experience scoring that can integrate with other tools in the Observer solution suite. Apex includes user-defined dashboards with customizable views into service health and status, on-demand application dependency mapping for fast multi-tier application visibility and more.



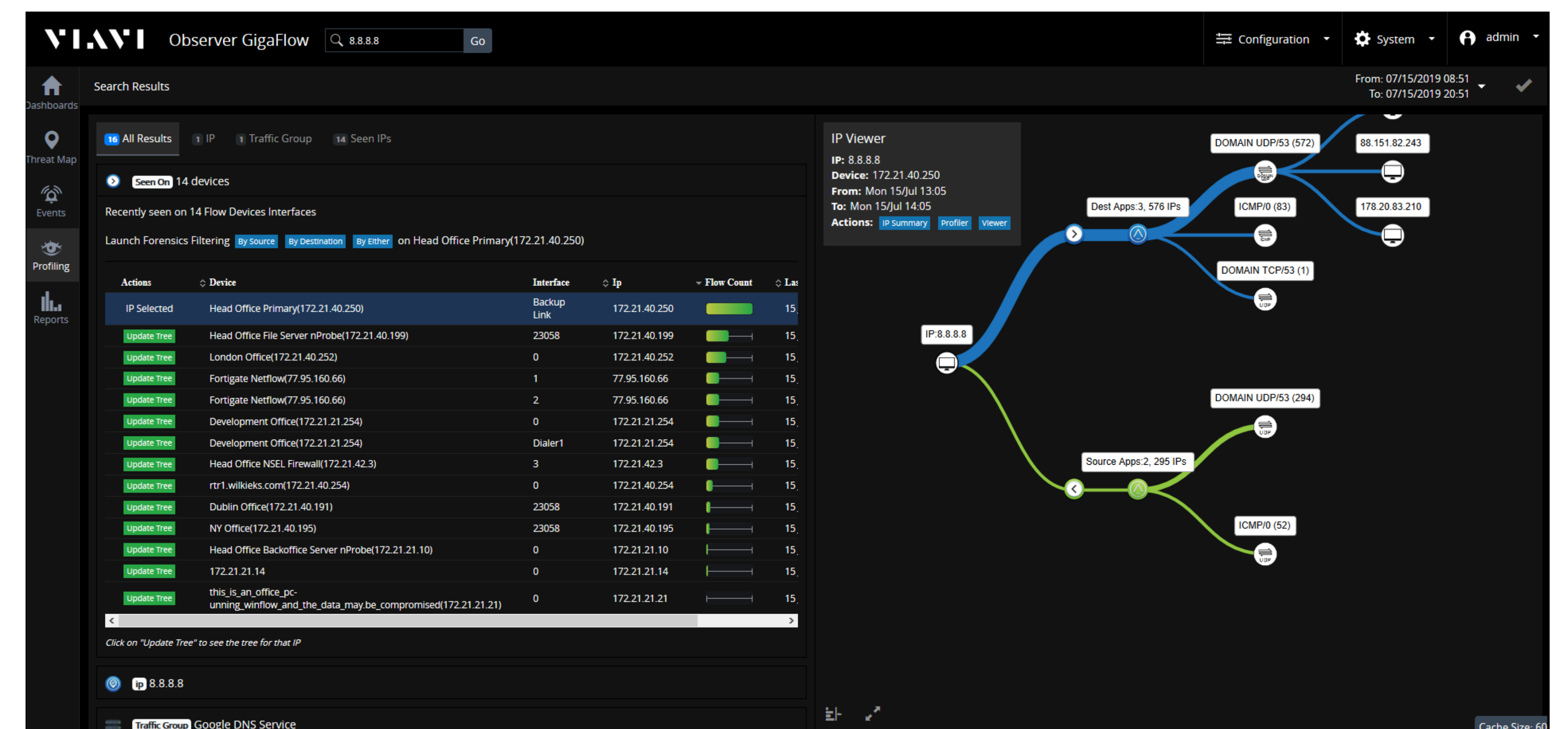
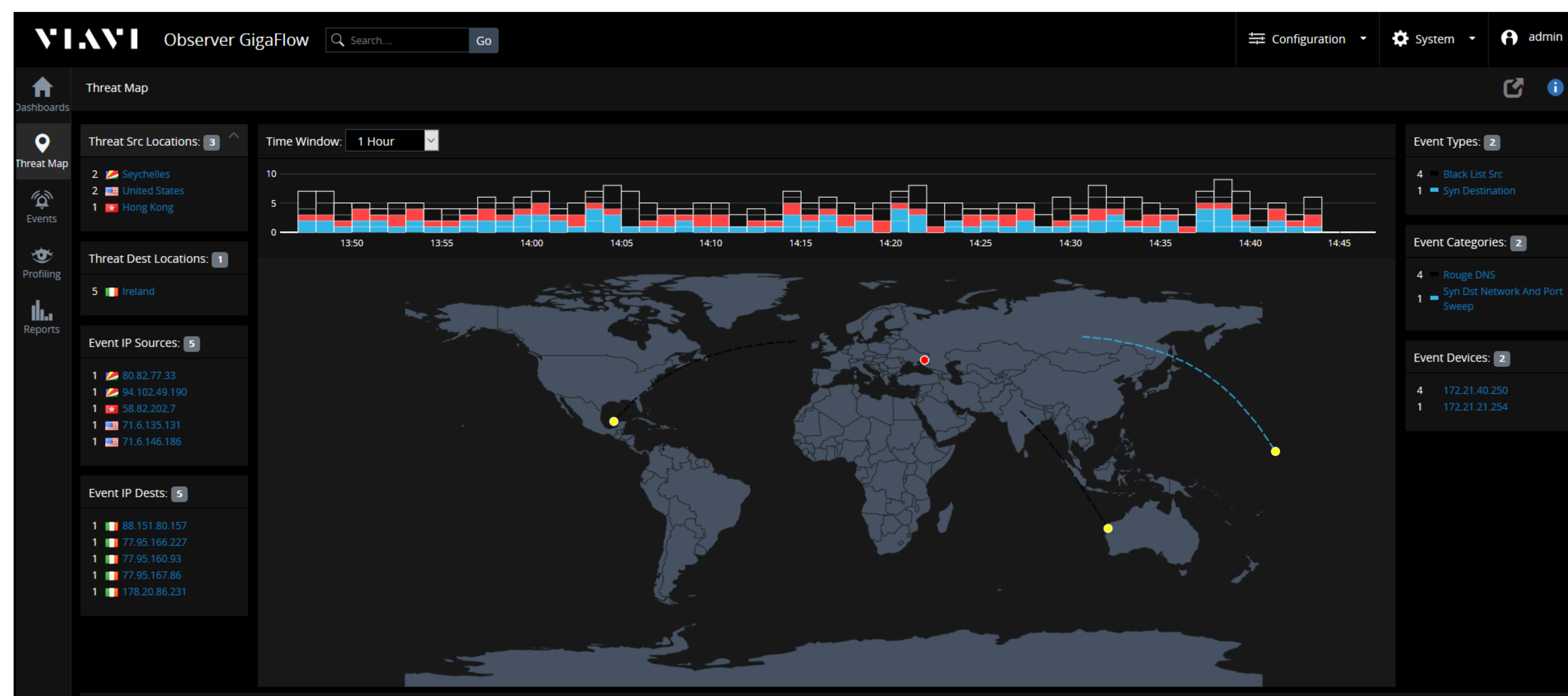
## Observer GigaStor



Observer GigaStor is a wire data and analysis appliance that allows NetOps and SecOps teams to address hybrid IT challenges by capturing and storing the most granular network data packets for performance analysis, troubleshooting, and security forensics investigations. Rather than attempting to recreate network problems to investigate issues or try to assess metadata, the packet capture features in GigaStor allow teams to analyze the actual anomaly data.



## Observer GigaFlow



Combined with Observer GigaStor, Observer GigaFlow allows your team to assess end-user and application capacity management, end-user flows, forensics, threat identification with scope and impact context, and advanced traffic profiling. GigaFlow combines multiple data sources into an enriched flow record by structuring data from numerous device and application types. Using multiple data sources, GigaFlow tells you what's connected and what's communicating.



Through the VIAVI Observer Platform, IT can experience both the benefits of network performance monitoring and the security that comes from smart network data analysis. Combined, these solutions support necessary collaboration between NetOps and SecOps users to centralize their network management and keep their network performing at the levels they require to support business needs. Achieving operational efficiency goals becomes realistic using Observer and frees up precious IT resources for a company's digital transformation initiatives.

**To learn more about the Observer Platform, visit [www.VIAVIsolutions.com/enterprise](http://www.VIAVIsolutions.com/enterprise) or [Request a Demo.](#)**