

Solution Brief

Single Pane of Glass for Network and Application Monitoring

Active and passive: You can have both high-definition network testing and wire-data analytics in one solution

Increasingly, enterprise IT operations teams and service providers require the complementary technologies of active and passive monitoring. Only by implementing both will IT operations teams be able to gain a full, end-to-end view of what is happening from overall network performance to application transaction-level activity. This is especially important for large, more complex networks that are migrating some or all of their business-critical applications to the cloud. IT teams need to conduct both traffic-based service experience monitoring, or wire-data analytics, as well as active, high-definition network testing to get a holistic view of how their end-to-end network is performing and how their end users are experiencing the applications and services that run across it. It would be useful to revisit the benefits of each to see why having this combined view is critical to optimize network performance and the quality of end user experience.

Traditional passive monitoring solutions capture traffic packets and report on network resource usage. They are able to monitor North-South traffic, providing limited visibility into the public and private cloud, but one constraint is that capture points are only in a finite number of locations and visibility is only possible in those points where traffic is captured. The other constraint is that visibility into East-West traffic is not achievable.

For enterprises such as financial services organizations or companies in the gaming industry where performance is absolutely critical, traffic-based service experience monitoring solves these challenges. This next-generation category of passive monitoring uses wire-data analytics and a lightweight footprint that allows it to be more pervasively deployed across the organization. It provides visibility into both North-South and East-West traffic, and it allows a more comprehensive view of how network and applications are behaving end-to-end.

If user experience is slow, it is often hard to tell if the issue is related to the network or an application if legacy passive solutions with disparate capture points are used. Then, if IT is able to determine that it is the network that is sluggish (and not an application), the next question becomes 'where is the network slow?' The pervasive visibility of traffic-based service experience monitoring allows users to quickly determine the cause and location of any performance degradation.

But, what is monitoring without analysis?

This combined view is critical

It is no longer about best effort. IT managers need to adapt to more dynamic environments that are constantly changing. Traditionally, the model for service providers and enterprises was to deploy monolithic systems where they install hardware and software, then configure, test, and then finally start monitoring and capturing information.

As the migration to the cloud continues, customers are re-provisioning and rapidly changing their infrastructures, sometimes creating and destroying them on the fly. The paradigm shift to a “tear down and build-up again” approach requires solutions that offer granularity of visibility, as well as ubiquity of visibility, and the ability to understand how the holistic environment is functioning.

Organizations need to look to partners who can build and deploy lightweight, purpose-built performance solutions with active and passive capabilities for monitoring services that are quickly instantiated or updated throughout the network in an agile manner. Comprehensive visibility into the performance and end user experience of these more short-lived services is critical.

The ability for organizations to be able to correlate highly granular active and passive monitoring data with data from other vendors and sources is also powerful.

Harmonize the insight with a single pane of glass: the Accedian advantage

Accedian’s Skylight gives IT operations teams the valuable combination of both active and passive monitoring with comprehensive L2-L7 visualization and analytics. This is particularly valuable for industries like financial services where service degradation is unacceptable. Skylight can detect hidden microbursts (down to 1 millisecond) that are causing slowness in a network in a very precise, cost-effective manner with exceptional granularity.

To improve on cost efficiencies and speed in resolving issues, Skylight also has the capability to turn full traffic packet information into compressed, structured metadata that helps IT analyze, correlate, understand, and act on that data in order to realize immediate value. This also drastically reduces the amount of captured information sent over the network: for example, 20 to 50 Mbps is all that is needed to store a full 10 Gbps link.

Even more advantageous, the platform gives IT operations teams a single, unified view of how their network is behaving and how end users are experiencing the network. This enables the prioritization of the most severe customer-impacting issues for immediate resolution.



Figure 1: Skylight provides comprehensive visibility into network performance and end user experience with combined active and passive performance data

No more swivel chair

Swiveling or moving between two or more solutions for application and performance management has clear downsides: it is not only the costs associated with purchasing and maintaining multiple solutions, but the time and resources spent. Worse, IT operations teams may still not get the visibility that they need.

To solve this issue, Accedian has combined active and passive monitoring together in a single analysis tool. Rather than swiveling between different tools to see network issues and application issues, Accedian delivers a single pane of glass. What does that mean? Efficiency, effectiveness, flexibility and scalability: IT operations teams have the ability to see network versus application response time at any particular point in their infrastructure in a single view and to see if issues come from hosted or private cloud environments. They can determine if the issue is application-related or network-related, and more importantly, drill-down to where the issue is occurring. They can see whether or not there is an issue with their own connectivity to the private cloud, if it is their remote sites, or if it is a WAN link to the remote site. And finally, they can see all of this in a single view on a single platform. The visibility is truly ubiquitous.

Total cost of ownership

Accedian's Skylight solution is well-suited for cost-sensitive environments. Many solutions today are costly and rigid, requiring expensive appliance-based solutions that are not designed for cloud environments. Accedian's solution is purpose-built for hybrid and cloud environments and is an entirely software offering for a compelling total cost of ownership. CAPEX savings are measurable since the solution does not require the deployment of additional expensive appliances. OPEX savings due to the metadata capabilities and reduced storage are also significant.

Performance overview

How does Skylight combine active and passive monitoring?

- Delivers dashboards as a single pane of glass that summarize all types of performance data, allowing for correlated analysis and faster mean time to resolution
- Combines active and passive data to get an overview of network and application performance for the full stack, layers 2 through 7
- Leverages machine learning and AI for best in class visibility and advanced insight
- Offers baselining of performance and network patterns to detect anomalies

Analysis and action enabled by the single view

Correlate Accedian's active and passive performance data with third data sources for more comprehensive visibility on performance and end user experience issues. Drill down faster to find the source of customer-impacting problems.

- Drill down to see the impact of network issues
- Correlate Accedian active and passive performance data with third party data sources for predictive analytics and proactive problem resolution

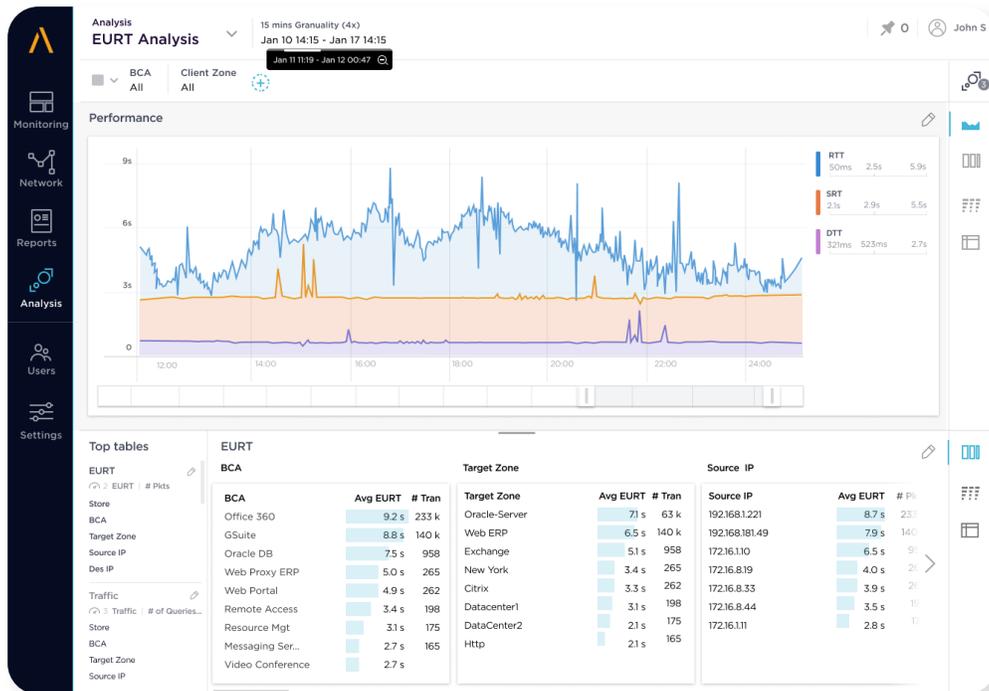


Figure 2: End user response time (EURT) shown by application, target zone and source IP

Summary

With the move to hybrid and cloud environments, there is an imminent need for new analytics-based monitoring software that can provide full stack views into service availability and network performance – in real time but also in context.

In a cost effective and scalable solution, Accedian's Skylight solution delivers all of that in a single pane of glass. It provides a summary of actionable active and passive performance data in a single NAPM solution, which is needed by today's IT and network ops teams to respond effectively to end user and performance needs in dynamic hybrid and multi-cloud environments.



“Network operations teams are desperate for this kind of consolidation because it can streamline operations and improve their visibility into application performance and end user experience.”



Shamus McGillicuddy, Vice President of Research,
Network Management, Enterprise Management Associates

About Accedian

Accedian is the leader in performance analytics and end user experience solutions, dedicated to providing our customers with the ability to assure their digital infrastructure, while helping them to unlock the full productivity of their users.

Learn more at [accedian.com](https://www.accedian.com)

Accedian | 2351 Blvd. Alfred Nobel, N-410 | Saint-Laurent, QC H4S 2A9 | 1 866-685-8181 | [accedian.com](https://www.accedian.com)

© 2020 Accedian Networks Inc. All rights reserved. Accedian, the Accedian logo and Skylight are trademarks or registered trademarks of Accedian Networks Inc. To view a list of Accedian trademarks visit: [accedian.com/legal/trademarks](https://www.accedian.com/legal/trademarks)