

# **VIAVI Observer**

## End-User Experience (EUE) Scoring

Identify, Prioritize, and Resolve End-User Experience Challenges within a Single Score When users express concern, engineers often find themselves sifting through a sea of performance metrics to determine what they experienced and where the problem resides. When all indicators are green, resolving persistent end-user experience issues is even more challenging. According to Forrester Research, one-third of user complaints linger without resolution for a month or are never resolved.<sup>1</sup>

The VIAVI Observer solution replaces dozens of key performance indicators (KPIs) with a single easyto-understand metric combined with detailed score deductions – isolating the problem and providing needed information to prioritize remediation. Our patented technology analyzes transactions at the packet level, empowering engineers with actionable information needed to validate and solve user experience issues with a single score. Automated scoring, prioritization, and domain isolation helps IT teams with essential information to improve or restore the user experience.

<sup>1</sup>Forrester's 2020 Analytics Business Technographics<sup>®</sup> Workforce Survey

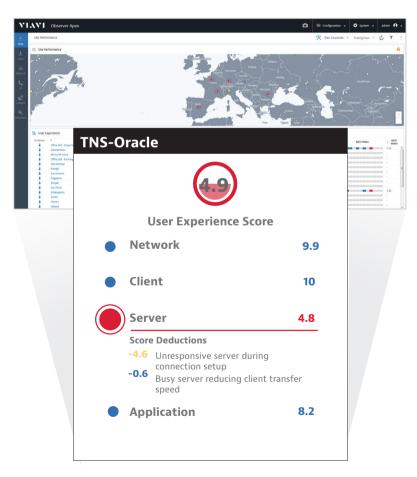
End-User Experience Scores satisfy multiple IT needs from network engineers and architects to NOC personnel and line of business owners by answering key questions related to business and IT initiatives:

- Are external customers and internal users satisfied with their experience?
- How has the new data center impacted user experience?
- Did the cloud migration strategy achieve its objectives?
- How did the application update affect performance?

Engineers can quickly determine:

- Whether a user-reported issue is real and affecting others
- How widespread and severe an issue is
- Which problem domains contribute to the performance degradation
- Which specific issues should be prioritized for triage and resolution

This is all answered with a single, color-coded score providing in-depth domain breakout, a simple problem explanation, and performance visualizations.



Identify and resolve global, site, and user-level issues



## Using Performance Data to Understand User Experience

Quantifying the quality of user interactions with the network and critical services is a complex process. Traditionally, two conventional approaches are typically used to evaluate the user experience:

- **1. Single Dimension:** Relies on using one or a few performance metrics as a proxy for user experience. However, this could oversimplify the many user interactions and may not capture the full scope of user satisfaction.
- 2. Data Deluge: IT teams attempt to analyze hundreds of KPIs from multiple tools and data sources to understand the user experience

Each approach has significant limitations making it a challenge to gain meaningful insights, identify critical issues, and prioritize the right problems at first glance. End-User Experience Scoring automates and simplifies the process of analyzing real-time transaction data, finding performance degradations, isolating the problem domain(s), and providing specific guidance on what to fix first.

#### Single Dimension:

The technician or vendor performs basic analysis relying on only a few metrics, such as response time, delay, or error logs, to represent user experience. However, with today's complex IT service issues, this is often unsuccessful and leads teams down the wrong path with inaccurate resolutions.

#### Data Deluge:

Alternatively, other network performance management solutions bury IT teams with an ever-growing number of disconnected KPIs. Too much data with no context, correlation, or analysis of end-user impact minimizes any potential value. This ultimately leaves IT teams frustrated and needing to get through the time-consuming process of figuring out which metrics matter.

## The Observer End-User Experience Score

The Observer End-User Experience Score differs from these two limited approaches by utilizing our patented adaptive machine learning – running dozens of KPIs through multiple algorithms to create a single score of all TCP network conversations.

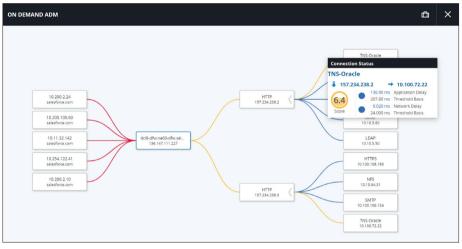
KPIs are analyzed and summarized into a single, easy- to-understand score with three key components:

- Overall Score: How users experience the service
- Domain: Identification of the network, application, server, or client issues contributing to the degradation
- Reason: Simple explanations of the problems

## **EUE Scoring in Action**

Observer End-User Experience Scoring combined with highly optimized workflows and actionable visualizations streamline navigation from a global summary to issue resolution:

- **Overall and domain-specific performance scores:** Easily identify poor performance through color coding that highlights problem areas directly on the scorecard.
- Score deductions: Clicking on any scorecard domain allows you to deep dive into a prioritized breakdown of individual score deductions.
- **On-Demand Application Dependency Map:** Observer delivers multi-tier service awareness, fast discovery of app interdependencies, and ad hoc rendering of maps visualizing these complex relationships with clarity. The integration of EUE scoring provides clear visual indications of where degradations are occurring.
- **Connection Dynamics (CDX):** CDX starts with the EUE scorecard for a single transaction and then combines it with an intuitive ladder diagram to illustrate the bi-directional communication between two hosts. Quickly visualize and analyze conversation details without looking at individual packets but the packets are only a click away if you need them!



On-Demand Application Dependency Map

CONNECTION DYNAMICS		<b>4</b>	۵	×
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	Network Delay Client Delay Server Delay	Delivery Time No Delay		
	10.200.100.60 Port: 35108	136.147.111.227 Port: 443		
A 3 Der Experience Score	60 ACX(059) 61 DataB-341()PSMACK(059)	59 Data (I -421) PSH ADC (457) Server Delay: 16-735 s		
		62 ACK (#61)		
Application	63 Data (L=1141) PSH ACK (#59) Delivery Time: 22.414 s			
Client		64 ACK (#63)		
Network		65 Data (L=1368) ACK (#63) Server Delay: 2,1147 s		
Server		66 Data (L=461) PSH ACK (#63)		
Score Deductions  Server taking too long to respond to requests Metrics Average Server Delay 29.2.5		67 Data (L=965) PSH ACK (#63) Delivery Time: 28,503 s		
Average Server Delay 23.2.5 s Total Server Delay 11 m 11.8 s Zero Windows 0	68 ACK (#67)			

Connection Dynamics (CDX)

## End-User Experience Score Breakdown

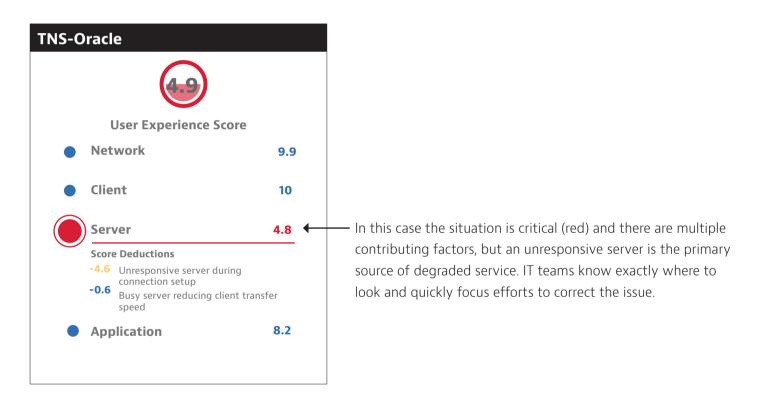
Scores range from 0 to 10 and use the following color coding:



Scores can describe a single user's experience or be expanded to provide visibility into a site, a service, or even a global enterprise view.

Anomalies become clear, false positives disappear, and the noise that frequently masks problems is eliminated. IT teams can save hours troubleshooting by "following the red scores" leveraging highly optimized workflows to triage, prioritize, and resolve issues.

Here's an example:



#### **Bottom-Line Business Value**

VIAVI Observer is an End-User Experience analysis platform that revolutionizes IT teams' approach, providing a single, highly effective score that transforms the analysis of numerous KPIs into a streamlined process. The singular score eliminates the guesswork allowing users to focus their efforts and attention in the right place the first time.

This outcome-driven methodology provides the right amount of information in an easy-to-understand format ensuring IT and Ops teams can identify the root cause efficiently, getting to problem resolution faster and more efficiently.

VIAVI Solutions is your trusted partner in delivering exceptional IT customer service by translating billions of network conversations into easy-to-understand and actionable scores. When packet-level information is needed, efficient workflows ensure that they are only a few clicks away. All this is accomplished with wire data alone and no complex agent instrumentation.

Observer End-User Experience Scoring greatly expands the number of IT staff who can leverage the power of packet data, including staff less familiar with network transactions such as NOC operators and tier 1 support.

By streamlining the performance management processes of IT staff involved in monitoring, triaging, and troubleshooting, teams can more effectively re-configure or optimize resources before conditions move from good to unacceptable or critical.

#### **Observer Overview**

Observer is a comprehensive network performance monitoring and diagnostics (NPMD) solution that offers valuable insight and assistance to network, operations, and security teams.

Observer is ideally suited for satisfying business goals and overcoming challenges across the entire IT enterprise lifecycle.



Learn more at viavisolutions.com/eue



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