VIAVI Solutions

Brochure

VIAVI Observer
GigaStor Portable

Portable Triage and Troubleshooting with Back-In-Time Analysis for Service Providers

Solve Network Issues Anywhere with the Most Powerful Portable Analyzer

Never Miss Intermittent Network Events at Remote Sites

Data rates in the core, hub sites, and enterprise customer locations have risen dramatically from 10G to 40G and now 100G. In the past, when sporadic performance issues occurred at any network location or customer site, troubleshooting in the field required technicians to sacrifice visibility and analysis. Observer® GigaStor™ Portable is the first self-contained performance monitoring and analysis solution for 10G, 40G, and 100G Ethernet networks. Never miss traffic or packets in the field, and finally solve recurring issues.

As part of the Observer Platform, count on GigaStor Portable for troubleshooting network infrastructure and performance as well as over-the-top application problems with packet data wherever they occur. Take the appliance anywhere to capture network traffic, isolate service issues fast, and reconstruct data streams.

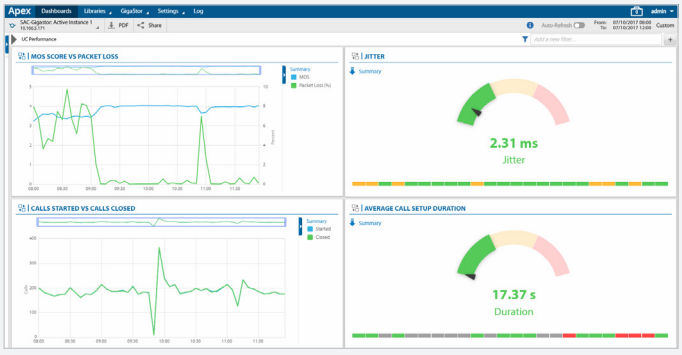
Benefits

- Validate and troubleshoot control plane and signaling issues at the evolved packet core (EPC) as well as voice, data, and video applications with packet-level insight
- Diagnose and quickly resolve network and application service issues at the mobile telephone switching office (MTSO), remote sites, or customer sites
- Capture and analyze recurring service anomalies with back-in-time analysis
- Quickly assess and solve VoIP and over-the-top service issues with out-of-the-box workflows
- Use secure, remote access to GigaStor Portable to troubleshoot network issues anywhere
- GigaStor provides peace of mind using AES-256 data-at-rest encryption to secure sensitive data without impact to capture or mining performance

Use Cases

Monitor Triple Play Service Quality

Validate and quickly troubleshoot issues with VoIP, video, and data application services anywhere in the field. Gain immediate and complete access to packets for real-time and back-in-time performance analysis. Observer provides in-depth understanding of user experience with VoIP and IP video through quality of experience scoring, call performance metrics, and monitoring the underlying IP infrastructure.



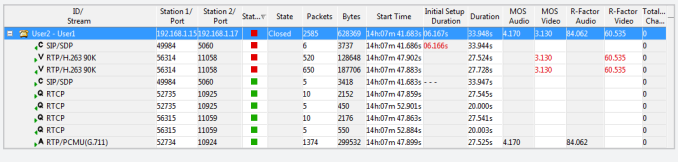
Aggregated site views of VoIP health

Is it the Network or Enterprise Subscriber?

In resolving connectivity and performance issues with enterprise subscribers, use GigaStor Portable at the network edge or remotely for troubleshooting and root-cause analysis. Observer performance insight conclusively determines the source of the issue and location between the service provider and enterprise subscriber networks. The solution can be used by professional service teams to advise subscribers in addressing issues, and accessed remotely allowing authorized technicians globally to assess and resolve customer issues.

Managing Over-the-Top Service Experience

As subscribers increase use of IP-based, over-the-top services, how do service providers validate and manage the last mile of on-demand experience? Observer (using GigaStor Portable as the data source) provides single-metric insight into the quality of subscriber experience coupled with visualizations of network and service-level conversations and analytics. Flexibly monitor end-user experience and performance in aggregate, by subset, or down to the individual user level. Out-of-the-box workflows for unified communications (UC) and applications allow technicians to navigate from high-level views to scope and triage problems. The next step is to perform root-cause analysis at the packet or transaction level.



ID/ Stream	Station 1/ Port	Station 2/ Port	Stat...	State	Packets	Bytes	Start Time	Initial Setup Duration	Duration	MOS Audio	MOS Video	R-Factor Audio	R-Factor Video	Total... Cha...
User2 - User1	192.168.1.15	192.168.1.17		Closed	2585	628369	14h07m 41.683s	06.167s	33.948s	4.170	3.130	84.062	60.535	0
SIP/SDP	49984	5060			6	3737	14h07m 41.686s	06.166s	33.944s					0
RTP/H.263 90K	56314	11058			520	128648	14h07m 47.902s		27.524s		3.130		60.535	0
RTP/H.263 90K	56314	11058			650	187706	14h07m 47.883s		27.728s		3.130		60.535	0
SIP/SDP	49984	5060			5	3418	14h07m 41.683s	- - -	33.947s					0
RTCP	52735	10925			10	2152	14h07m 47.859s		27.545s					0
RTCP	52735	10925			5	450	14h07m 52.901s		20.000s					0
RTCP	56315	11059			10	2176	14h07m 47.863s		27.541s					0
RTCP	56315	11059			5	550	14h07m 52.884s		20.003s					0
RTP/PCMU(G.711)	52734	10924			1374	299532	14h07m 47.899s		27.525s	4.170		84.062		0

In-depth metric views of video and VoIP streams

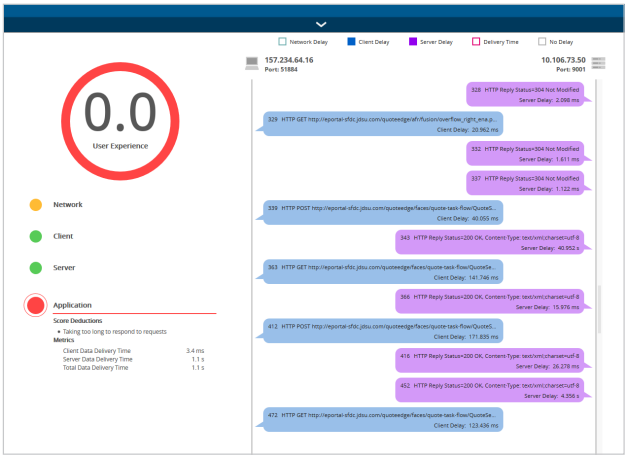
Key Features

Root-Cause Analysis

Analyze traffic in real time and perform root-cause analysis of data and network issues with traffic captures and insight before, during, and after the problem occurrence. Observer provides a network-wide view allowing engineers to track multiple operational metrics including bandwidth utilization, network top talkers, conversations and application metrics.

Visualizing Subscriber Experience and Flows

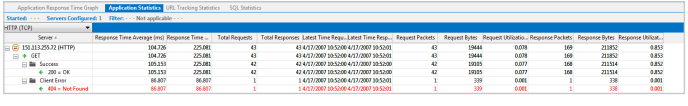
Observer and GigaStor Portable make understanding subscriber experience simple by displaying a single numeric score in green, yellow, or red to indicate the severity of the impact. User experience scoring takes the guesswork and manual sleuthing out of performance management by isolating problems at any level – network, application, server, or client domain. In addition to simple scoring, Observer Connection Dynamics visualizes individual network conversations to pinpoint which query or response is causing the issue. Retransmissions, delays, and dropped packets are flagged for fast identification of impairment sources.



Visualize subscriber experience and network conversations

Application Analysis

GigaStor Portable provides detailed intelligence for many well-known and user-defined custom applications. Beyond basic response time, using expert analytics offers awareness into actual service error, reason, and response codes held within the payload, invaluable when the issue ultimately resides with non-network or operations teams. The solution also displays transaction-level details, crucial for understanding the interactions between application tiers. Together these capabilities mean fast problem resolution and improved user experience.



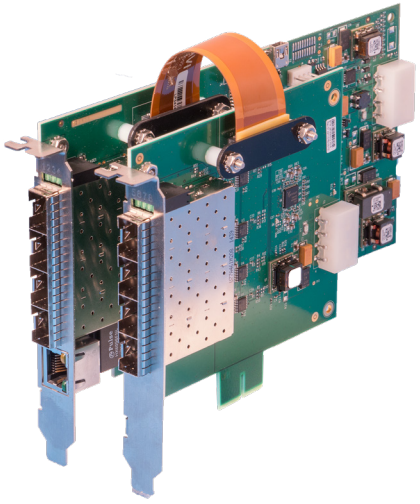
Assess application details and errors

Web-Based Trace Extraction

Whether performing troubleshooting directly or sharing with third-party solutions, accessing packet-level data is easy with GigaStor web-based trace extraction. Critical service-level communications can be mined through a browser (without a thick client) by using the built-in web service, and then opened in any third-party software like Wireshark for further decode and analysis.

Optimized Packet Capture

Recognized by Gartner as a Magic Quadrant Leader for network performance monitoring and diagnostics, the custom Gen3 capture card used by GigaStor provides the fastest write-to-storage performance and mining speeds in the industry. Designed to integrate nearly all core packet processing and analytics functionality in hardware, GigaStor is able to keep up with the fastest gigabit, 10G, 40G, and 100G network links while delivering complete visibility into network conversations and application transactions.



Custom-designed capture technology for 10, 40, and 100G

Data Protection

To eliminate the risk of exposing data and incurring potential compliance violations, GigaStor provides AES-256 encryption of data without degradation to packet capture and storage performance. Integration with hardware security modules (HSM) enables GigaStor appliances to perform conversation-based decryption using SSL/TSL certificates while fully complying with PKCS #11 standards.

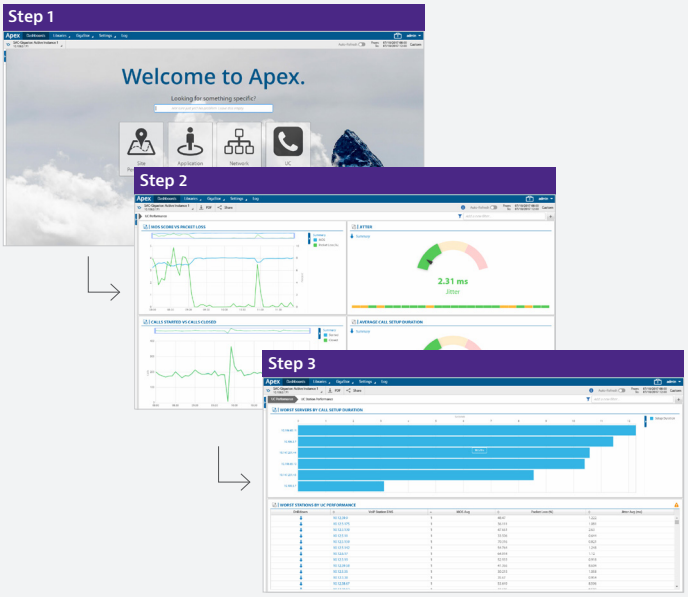
Product Options

GigaStor Portable is a custom-designed appliance built to allow for flexible application and network debug, especially where a dedicated probe is not optimal. Its lightweight form factor makes it easy to quickly move in the field whether to an EPC, customer location, branch office, or retail location. The appliance comes in the following configurations:

Deployment	**GigaStor Portable**
Monitoring Interfaces	8 x 1G/10G 2 x 40G 2 x 100G
Base Storage	8 TB
Ingress Performance	20G

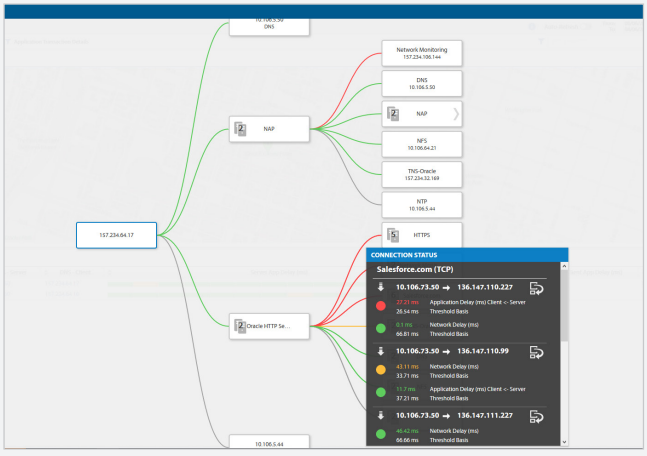
Observer Platform Overview

The Observer Platform is a comprehensive network performance monitoring and diagnostics (NPMD) solution that offers valuable insight and assistance to network and operations teams. As an integral part of the Observer Platform, GigaStor Portable plays a pivotal role in providing detailed transaction and network level conversations. This data is the basis for performing fast troubleshooting while populating easy-to-use Observer Apex dashboards with out-of-the-box workflows, deep-packet analysis and long-term reports.



Automated navigation to resolution via Apex workflows

Leveraging insight from Apex, engineers can assess subscriber satisfaction by looking at a single numeric score alongside automated insight that isolates problems to the network, application, server, or client domain. Its out-of-the-box workflows enable technicians to solve any network, application, or UC issue within three clicks. Application dependency mapping provides automated visualization of service performance and the underlying front and back-end networks to assess and track critical issues including propagation delay, network bottlenecks, and network infrastructure issues.



View performance connections between underlying network devices

[i] Tolly, 2017 VIAVI Solutions Observer GigaStor 288T 10/40 Gigabit Ethernet Capture Performance Evaluation, Document Number 217122, http://tolly.com/DocDetail.aspx?DocNumber=217122

VIAVI Solutions

Contact Us **+1 844 GO VIAVI**
(+1 844 468 4284)

To reach the VIAVI office nearest you,
visit viavisolutions.com/contact

gigastorportable-br-ec-nse-ae
30187418 900 0818