xSIGHT™ Traffic Analysis Agent (TAA)

Mobile Network, Service, Customer KPI Generation

xSIGHT Real-Time Intelligence Platform and TAA Description

The xSIGHT RTI Platform is a carrier-grade assurance data collection and mediation platform that powers xSIGHT and third-party applications with a two-layer infrastructure. The data access agents layer collects data from a variety of sources, including traffic, Viavi Solutions sources, and non-Viavi sources (such as network elements [NEs] and third-party probes). Whereas, the mediation, correlation, and policy-management layer provides all the additional data processing, including enrichment, adaptation, correlation, and aggregation that the xSIGHT portal applications require.

TAA is an xSIGHT data access agent that passively monitors both control and user-plane IP-based traffic to build network, service, and customer (KPI) SMARTmetrics™ that are then fed to the xSIGHT mediation component or to third-party KPI-based apps. TAA is configured as a server plus Viavi software virtualization-ready appliance.

SMARTmetrics — Quickly Gain Deep and Granular User-Plane Visibility

Based on a streamlined, time-based KPI generation process, the xSIGHT TAA quickly delivers SMARTmetrics insight into both control and user-plane performance.

<table>
<thead>
<tr>
<th>Time</th>
<th>IMSI</th>
<th>Cell ID</th>
<th>IMEI</th>
<th>IP Addr</th>
<th>TCP</th>
<th>Win Size</th>
<th>Delay</th>
<th>Load Time</th>
<th>TTL</th>
<th>X Transmits</th>
<th>T-Put</th>
</tr>
</thead>
<tbody>
<tr>
<td>UDP</td>
<td>Packet Loss</td>
<td>Jitter</td>
<td>T-Put</td>
<td>VoLTE</td>
<td>MOS</td>
<td>Delay</td>
<td>Etc.</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Example of SMARTmetrics (user plane) record

Key Benefits
- Increases visibility into customer application experience
- Significantly lower cost than traditional monitoring solutions for the same visibility and throughput levels

Key Features
- Fast response and high granularity user-plane visibility engine
- Patented service, app, and URL categorization process with very broad coverage
- Value-based KPI generation process
- SMARTmetrics KPI feed for third-party applications
- Virtualization-ready architecture

Applications
- Monitor mobile network, service, and customer performance in real time
- Troubleshoot mobile network, service, and customer performance faults

xSIGHT Customer Experience Assurance Portfolio
SMARTmetrics — Identify User Services, Apps, and URLs

Using a patented domain name system (DNS)-based method, or a powerful deep packet inspection (DPI) engine, the xSIGHT TAA can identify hundreds of end-user applications. With both the revenue value of traffic and the acceptable network performance requirements varying greatly depending on the end-user application, the ability to identify these applications is critical for effective mobile assurance.

SMARTmetrics — Vary KPI Detail Based on Traffic Value

The xSIGHT TAA supports a new value-based KPI generation process that, based on user-entered (traffic) value definitions, automatically varies KPI generation depending on the traffic’s value. In the mobile broadband era, traffic value varies greatly so it does not make financial sense, from an assurance solution perspective, to analyze it all the same way.

Minimal processing is applied to low-value traffic to get basic, summarized performance analytics. However, more processing is applied to high value traffic, such as from high-revenue services or VIP business subscribers, to gain deep insight into the individual customer experience for services and over-the-top (OTT) applications. Using a traffic-value based approach, significantly reduces the solution costs and decouples cost scaling from traffic growth.

Monitor Network, Service, and Customer Performance in Real Time

The xSIGHT TAA is the ideal agent for generating traffic-based mobile KPIs that Viavi xSIGHT and third-party monitoring applications use for impending or recently occurring customer-experience-impacting fault-notification purposes. Its ability to deliver quick SMARTmetrics identifying user apps’ service functionality and value-based KPI analytics makes the xSIGHT TAA much more effective than similar products—and at a lower cost.

Troubleshoot Performance Faults

Traditionally, troubleshooting mobile faults involved only protocol transaction tracing and decoding, a very technical task that only highly skilled staff could perform. Now, the xSIGHT apps can be used for initial fault troubleshooting using KPI metrics—a faster, easier process the xSIGHT TAA enables via SMARTmetrics. Users can also define new KPIs that are instantly reported in the next batch of results.

Specifications

<table>
<thead>
<tr>
<th>Physical Parameters</th>
<th>Size</th>
<th>Weight</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server information</td>
<td>1U</td>
<td>19.8 kg</td>
<td>2 AC (750 W) or 2 DC –48V (1100 W)</td>
</tr>
<tr>
<td>Interface configuration</td>
<td>4 x 1 G or 2 x 10 G</td>
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<td></td>
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<tr>
<td>KPI output format</td>
<td>CSV feed (SFTP/SCP – TAA runs client)</td>
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<tr>
<td>KPI Generation – Interface Support</td>
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<tr>
<td>2G/3G voice service control plane interfaces</td>
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<tr>
<td>2G/3G/LTE data service control plane interfaces</td>
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<tr>
<td>2G/3G/LTE data service user plane interfaces</td>
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