

# SIP/RTP Correlation

## VoIP Subscriber- and User-Aware Forwarding

It just got easier — and more efficient — to monitor voice- and video-over-IP (VoIP) sessions carried in Real-Time Transport Protocol (RTP) and managed by Session Initiation Protocol (SIP) signaling. It's called the SIP/RTP Correlation application, and is a licensable and intelligent addition to the GigaSMART® engine that enables enterprises and service providers to monitor VoIP traffic.

Because it understands the stateful nature of the SIP protocol, the SIP/RTP Correlation application can match and pass an identified user's SIP signaling and RTP media sessions to the appropriate analytics, performance and security subsystems. That's a big help ensuring an accurate view of the session performance, the user's quality of experience and secureness of the communication.

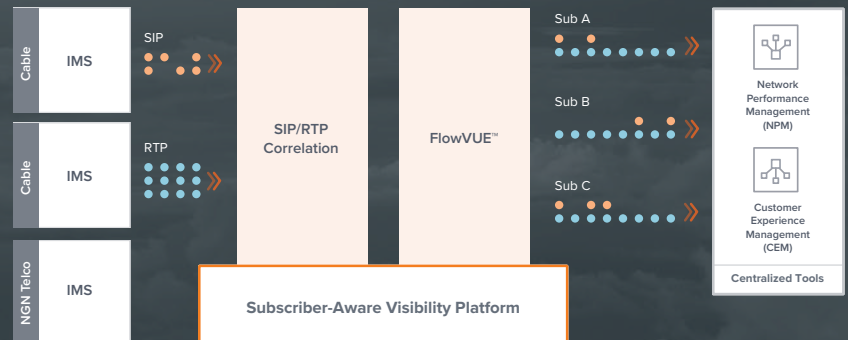


Figure 1. Correlation of SIP and RTP sessions for filtering, whitelisting, sampling or load-balancing VoIP traffic.

### KEY FEATURES

- Stateful filtering based on subscriber ID's (SIP URI)
- Stateful correlation of SIP with RTP messages
- Correlation of SIP URI with corresponding RTP identifiers
- Forward subscriber-specific control and media sessions to tools
- Traffic filtering, replication and distribution based on SIP URI

### KEY BENEFITS

- More efficient, effective tool processing throughput
- Improved analytics accuracy from reliable correlation of subscriber sessions
- Proactively identify service issues impacting subscribers
- Empower monitoring tools to gauge end-user QoE
- More reliable accounting, billing and subscription management
- Fewer errors through accurate correlation of subscriber data

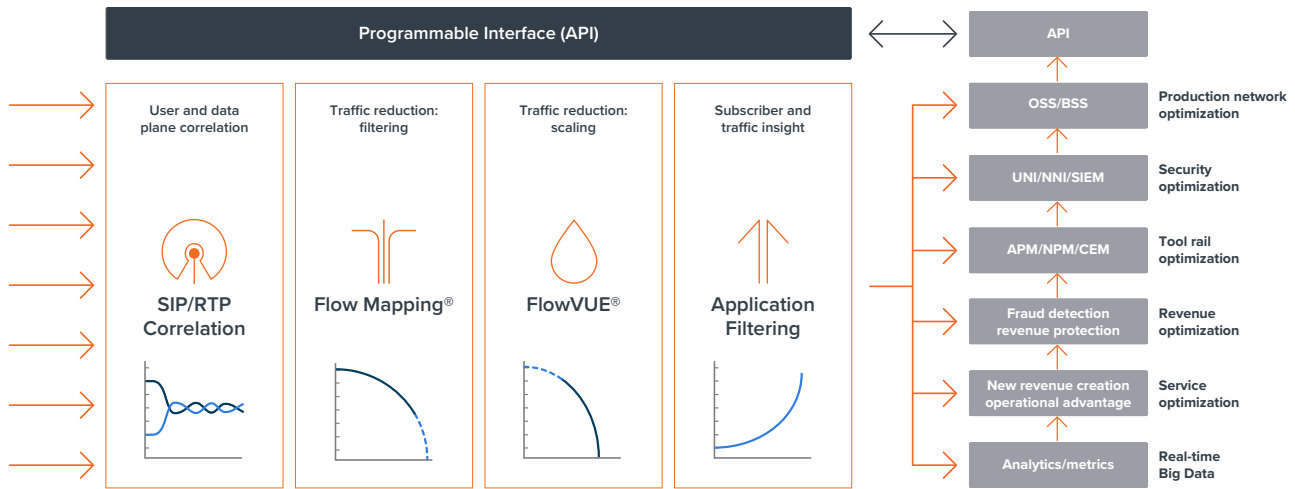


Figure 2. An example of a best-in-class, modern, subscriber- or user-aware visibility platform.

## The Challenge for Service Providers

Service providers' monitoring-tool infrastructure has been unable to scale to meet the drastically increasing volume of information traversing their networks. Meanwhile, it's difficult for service providers to effectively monitor subscriber performance and quality of experience (QoE). Voice services are particularly critical from a compliance and competitive perspective.

SIP is the dominant method to initiate, maintain, modify and terminate voice and video calls over IP in service providers' networks. RTP provides the real-time transmission of voice and video payloads across the same networks, although RTP and SIP session can take completely different paths. To gain visibility into a subscriber's voice traffic, you need to understand the subscriber attributes and stateful information contained within SIP to correlate subscriber-specific RTP traffic so that monitoring tools can achieve an accurate view of the subscriber's traffic on the network.

### THE SOLUTION

With the SIP/RTP Correlation application, you can intelligently forward VoIP sessions to specific tools by filtering on ranges of or specific user IDs, sampling just a percentage of media sessions and/or balancing the aggregate SIP and RTP sessions.

#### Subscriber Filtering

Use attributes to select and forward subscriber traffic to monitoring tools. Attributes include subscriber information such as SIP URI and RTP stream identifiers.

#### Correlated FlowVUE®

Ensure that 100 percent of traffic for a sampled subset of subscribers or users can be forwarded to monitoring tools, allowing the traffic to be scaled to fit the existing tools.

#### Load Balancing

Coherently load-balance all sessions to multiple tool ports using SIP URI-based load-balancing criteria.

#### Whitelist High-Value Subscribers

Monitor all sessions for high-value subscribers.

## Offload Analytic Tools, Gain New Operational Efficiencies

You can combine SIP/RTP correlation with other GigaSMART traffic intelligence applications, such as:

- Application Filtering Intelligence to eliminate entire sessions of unwanted traffic
- SSL Decryption to decrypt secure SIP signaling traffic for malware analysis or inspection by other security functions
- FlowVUE session sampling to get a representative view of a subscriber's usage patterns

Armed with these subscriber-level insights, Gigamon solutions can help you identify roaming subscribers across peered networks through SIP/URI filtering.

**For more information on GigaSMART applications, please visit [GigaSMART information page](#).**