

**Gain real-time business insights by correlating and analysing data from millions of subscribers. A turnkey application architected to meet the most demanding performance and scale requirements of network operators. The product is actively in use across global Governments and commercial networks.**

## Subscriber Analytics

Communication Service Providers are at a critical juncture. To maximise profits, they need analytics which can provide a deep understanding of their subscriber base. Analytics to provide a competitive advantage and increase profits throughout the entire customer lifecycle – for tiered-usage plans, self-service support, OTT services, upgrades to bigger data plans and anticipating churn. Analytics that help with decisions on how to optimise network utilisation and deploy new capital for network build-out.

Many network operators struggle to get adequate visibility into subscriber activity. Their underlying analytics architecture can't scale with the massive amounts of data generated from millions of subscribers – with billions of new events added daily. Monetise network traffic by correlating subscriber identify with domain and service types. Easily analyse and generate reports for management and operations. Integrate data into existing workflows and portals.

### Easy to Extract Insight

The system is designed from the ground-up to execute queries across geographically distributed locations. It is easy to access data and instantly gain enriched information for any particular subscriber or group. Flexible categorisations assigned to subscribers, domains and services allow for deep understanding of all usage within the network. Popular domains and services of interest can be categorised to see how much video, download, web, and gaming traffic each subscriber has utilised.

Deep insight into subscriber activity is readily available with the ease of SQL. Create customisable dashboards with industry standard BI tools. Drill down by multi-dimensional categorisations – by subscriber, groups of subscribers/locations, domains and service types – to improve billing, support, marketing and network build-out activities. Export reports to external systems using standard API's. Issue ad-hoc analytical or forensic queries.

## Easy To Deploy

A drop-in solution which can be implemented in hours. The solution is delivered as software and no specialised hardware is required. Hardware resources can be either physical or virtualised. Software runs within a small compute and memory footprint. Automated software management means no software upgrades are required by you.

Hardware can be deployed anywhere within your network where rack and compute space are available and the most cost effective. The platform is future-proof whereby data can also be stored within public cloud data centres including Amazon AWS, Microsoft Azure and Google Cloud Platform.

### Real-Time Correlation

High-speed interfaces allow for the passive collection of NetFlow and IPFIX data at rates of many millions of records per second. A highly resilient, messaging & file-based queuing scheme immediately persists any collected data. Correlators perform multi-faceted categorisation, in real-time, based on the latest information such as subscriber, domain and service type – leveraging real-time network usage information from DNS address responses (millions of responses/second) and DHCP/RADIUS lease notifications (thousands of messages/second).

Alternatively, event data can be taken directly from existing deep packet inspection (DPI) deployments. Doing so bolsters existing investments with a flexible, high performance analytical engine and long-term data persistence.

### Network Operator Scale

The system has been proven to scale for even the largest network operators – able to ingest, correlate, analyse and retain massive volumes of data. Ingest and correlate billions of new network events every day generated by millions of subscribers. Respond to queries on hundreds of billions of records in seconds. Cost effectively retain trillions of records, with petabyte scale, for analysis and compliance purposes.

## Overcome The Challenges With Network Analytics - Gain Actionable Insight

### Solution Highlights

- Enriched real-time subscriber visibility
- Drill down by multi-dimensional categorisation
- Customisable dashboards
- Deploy with physical or virtual hardware
- Future-proof as data can be stored in public clouds
- Passive collection of telemetry data
- Automated system and software management
- Fine grained access control and privacy configurations
- Drop-in solution, implemented in one week, fast ROI

### Communication Provider Scale

- Granular analytics across millions of subscribers
- Collate across millions of domains and services
- Supports millions of NetFlow or IPFIX events/second
- Thousands of DHCP or Radius messages/second
- Millions of DNS responses/second
- Up to 1-year retained subscriber-level usage history
- Retains trillions of records
- Responds to ad-hoc and forensic queries in seconds
- Responds to data queries in seconds

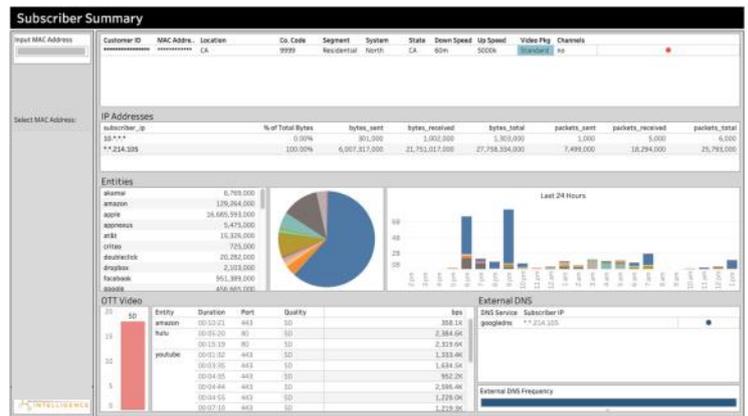
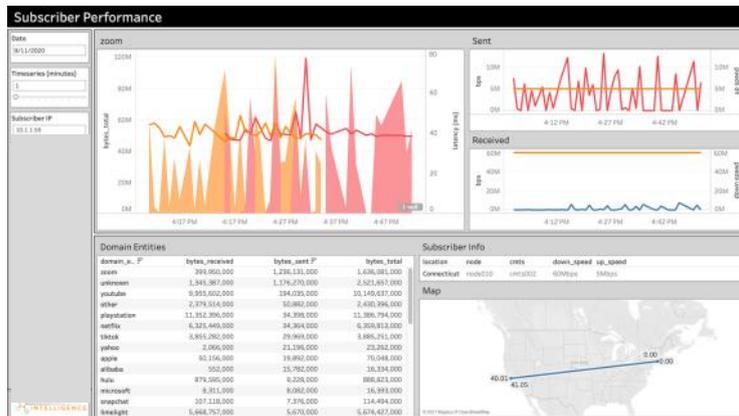
### Example Use Cases

- Analytics for usage based billing systems
- Self-service customer support portals
- Marketing promotions and custom product bundles
- Capacity planning and optimisation bandwidth utilisation
- Network troubleshooting
- Compliance/forensics with long-term retention

### Easy to Manage and Use

- Deploy and manage quickly using DevOps tools
- Seamlessly integrates with standard BI tools
- Standard interfaces and API's to existing systems
- Supports new requirements without re-design or re-load
- Ease and familiarity of SQL

**Trusted and Field Proven** - The Subscriber Analytics platform is utilised for some of the most demanding and security sensitive applications, with hundreds of customers benefiting from distributed analytics software. This includes deployments within network operators, governments and security providers to capture, store and analyse data for millions of subscribers. Edge Intelligence production systems today manage over a trillion records with low maintenance, supporting many petabytes of data.



SA Group is a business management consultancy solving critical, highly complex challenges by designing, implementing and supporting secure mission critical infrastructure.

The company supports organisations in both the commercial and public sectors to deliver vital projects, including the challenging defence environment, working collaboratively with clients to create value, maximise growth and improve business performance. SA Group's experience of protecting mission-critical infrastructure within Defence and Critical National Infrastructure complements the Subscriber Analytics capability which is deployed within a number of US Cable Suppliers with instances supporting up to 20 million subscribers.

