



SOLUTION BRIEF

GPRS Tunnelling Protocol (GTP) is commonly used to carry mobile data across service provider networks and includes control plane (GTP-C) and user-data plane (GTP-U) traffic. Therefore, visibility into a subscriber's activity requires the ability to understand the stateful nature of GTP (v1 and/or v2) and to correlate subscriber-specific control and data sessions to gain an accurate view of the subscriber's session.

OVERVIEW

The shift of data traffic from fixed line to mobile networks and the massive increase in mobile services now and in the future, makes visibility and analysis a huge challenge for Law Enforcement Agencies (LEAs). This problem is expected to grow exponentially.

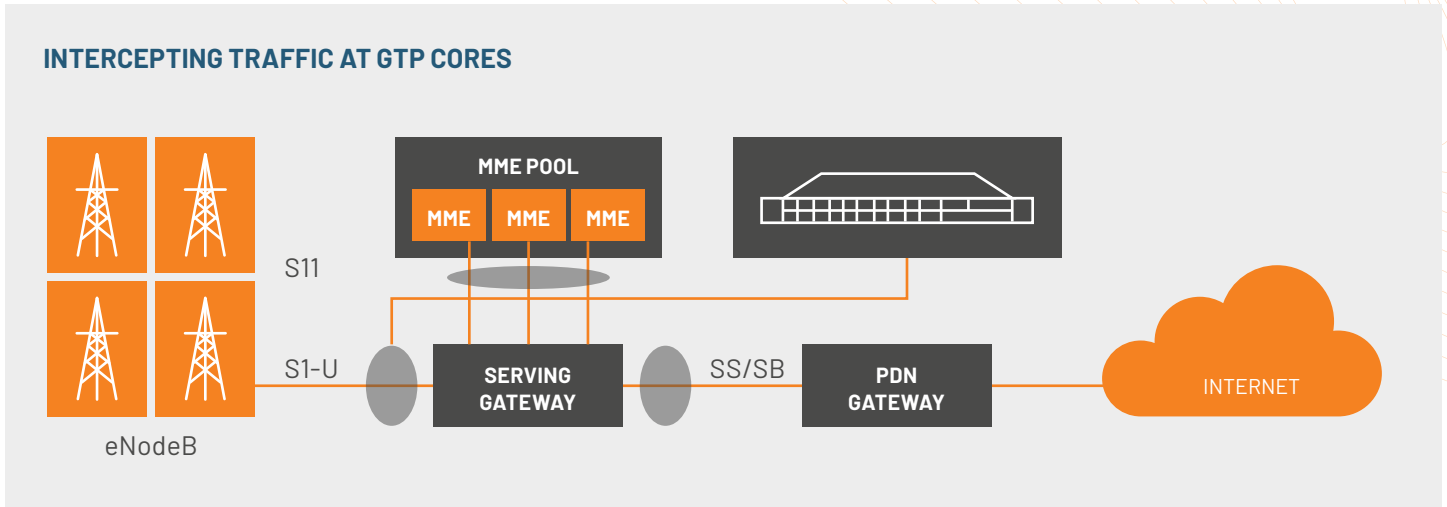
Use cases such as gathering flow records tagged with IMSI/ MSISDN/ IMEI, application type, and other metadata attributes OR Identifying and Intercepting traffic from target subscribers based on an International Mobile Subscriber Identity (IMSI) or a group of IMSIs are extremely hard to be done at scale.

Another scenario would be intercepting high value subscribers' VoLTE traffic based on a specific QCI/ APN/ IMSI combination.

PURPOSE

- Track tunnels, states and directions
- Track SIP and RTP stream for a given VoLTE call
- Extract additional metadata, for example, IMSI, IMEI, OS, location information tracking area code (TAC)
- Dynamic interception for calls and flows in progress
- Full ETSI compliance
- De-duplication for same call seen on multiple legs
- Multiple Target Attributes per call e.g., calls can be simultaneously tracked using IMSI or IMEI or MSISDN or E164

INTERCEPTING TRAFFIC AT GTP CORES



PLATFORM HIGHLIGHTS




The performance figures mentioned in this datasheet are based on data rates observed in a typical mobile network and pattern of traffic. The actual performance of the system may vary depending on specific network conditions.

Interfaces	Mobile Core: S11, S1U, S5/S8, S2b		
Time Stamping	3.2ns resolution, with PPS synchronization		
Metadata Extraction	Content or headers (e.g. SIP: FROM/TO, IMSI, IMEI, MSISDN, E164)		
Data Filtering Combinations	APN, IMSI, MSISDN, IMEI, SIP From/ To, E164 CC and Phone Numbers		
Management Ports	Redundant 1G/10G (dual media interfaces)		
Data Access	SSL option for all communications in-flight		
Standards Supported	ETSI		
System Supervision and Monitoring	Heartbeat API IPMI, Syslog		
Data Adapters	JSON TLV Binary API Interfaces to third party mediation/ retention platforms via KAFKA		
Data retention	AAA and RBAC (Role Based Access Control) Complete Audit trail SSL for all communications in-flight		
Ports	Up to 8x10G* or Up to 2x40G	Up to 32x10G*	Up to 32x10G* or 8x40G or 4x100G
Processing throughput	Up to 50 Gbps	Up to 320 Gbps	Up to 320 Gbps
Height	1U	3U	2U

* via breakout cables, * Ingest interfaces to be specified at time of purchase Do these * correlate or should one be **

INTERCEPTING TRAFFIC AT GTP CORES

HARDWARE PLATFORM AND OPERATING SYSTEM

	1U Supermicro SYS1029P-WTRT	1U Supermicro 1114S-WTRT	3U SuperServer 5039MP-H8TNR Blade
			
CPU	Intel Xeon Gold 6240Y Up to 28 Cores	CPU AMD EYPC 7402P Up to 64 Cores	Intel Xeon Gold 6240Y Up to 28 Cores
Memory size	384GB	384GB	384GB
SATA DOM	128GB	128GB	N/A
FPGA	1 NIC type depends on configuration	1 NIC type depends on configuration	1 NIC type depends on configuration
NVME M.2 for OS and logs	N/A	N/A	1
OS	CentOS 7.2 Kernel 3.10		
Dimensions (HxWxD)	1.7 x 17.2 x 23.5" (43 x 437 x 597mm)	1.7 x 17.2 x 23.5" (43 x 437 x 597mm)	5.21 x 17.26 x 23.2" (132.5 x 438.4 x 589mm)
Net weight	46lbs (20.9 kg)	46lbs (20.9 kg)	62.2 lbs (28.21 kg)
Cooling fans	4 Counter-rotating 4cm PWM fans 2 fans for AOC cooling	4 Counter-rotating 4cm PWM fans 2 fans for cooling AOC	4 hot-swap 8cm cooling fans Fan speed control
Indicators	<ul style="list-style-type: none"> Power status LED HDD activity LED Network activity LEDs Universal Information (UID) LED 	<ul style="list-style-type: none"> Power status LED HDD activity LED Network activity LEDs Universal Information (UID) LED 	<ul style="list-style-type: none"> Power LED Node status LED
More information	Supermicro website	Supermicro website	Supermicro website

ENVIRONMENTAL SPECIFICATIONS/CERTIFICATIONS

Environmental Spec	Operating: 10°C to 35°C (50°F to 95°F)	Non-Operating: -40°C to 70°C (-40°F to 158°F)	Operating Relative Humidity: 8% to 90% (non-condensing)	Non-operating Relative Humidity: 5% to 95% (non-condensing)
Certification	RoHS compliant, 80 Plus certified			