

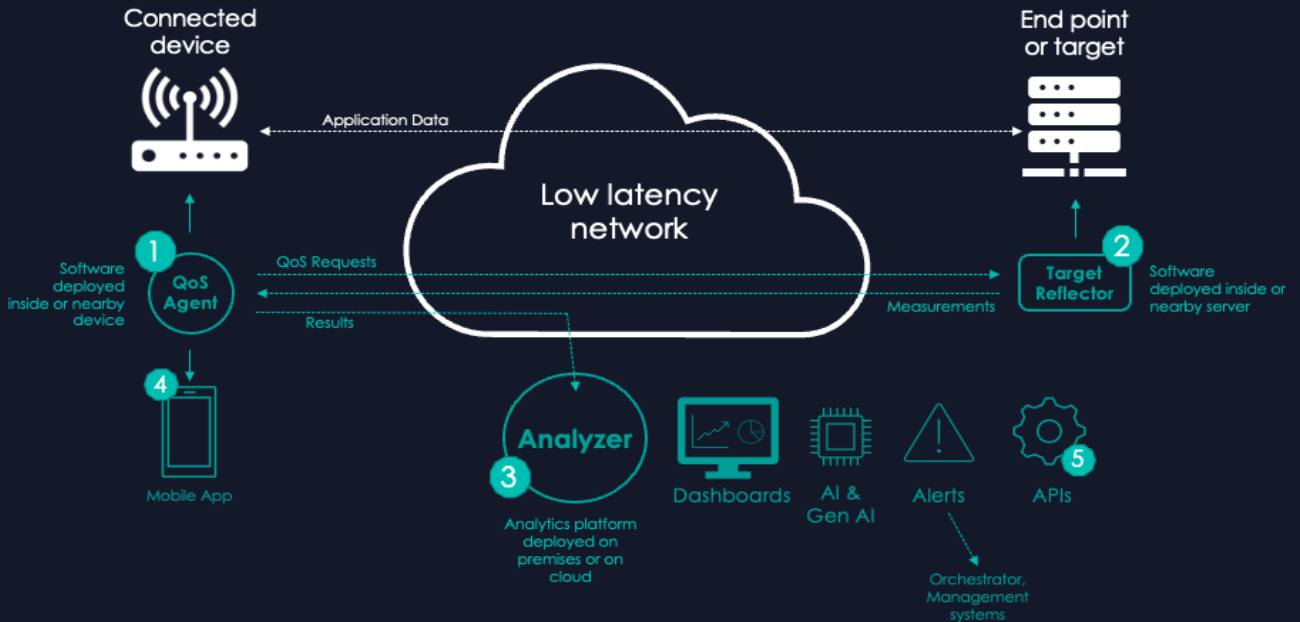
Monitor, Predict, Optimize connectivity performance of any IP networks for time-sensitive innovations

LATENCETECH

A real-time AI-based service assurance solution for cellular and IP networks with a focus on stable low latency. Using SAAS and AI, our solution helps mobile operators, telecom vendors and advanced industries to track, predict, understand and secure the new benefits of low latency connectivity in support of their time-sensitive innovations.



Our container-based solution is composed of three components that can be quickly and easily deployed to fit your specific monitoring needs. A **QoS Agent (1)**, performing end-to-end active measurements using multiple network and IP protocols; A **Reflector (2)**, acting as the target for the path to be monitored and the **Analyzer (3)** a real-time data analytics platform running diagnostics, predictions and providing end-to-end observability of network quality metrics (latency, throughput, reliability) using visual dashboards, **open APIs (5)**, threshold alerting, diagnostics and recommendations to understand and resolve issues. The QoS Agent can be deployed as a **mobile app (4)**.



Several QoS Agents can be deployed to actively monitor diverse network links aiming at the same Reflector. QoS agents can also be positioned on CPE, connected equipment, virtual machines, network nodes, Mobile Edge Computing node to get real-time key performance indicators. Reflectors are typically deployed onto or near the server supplying application data. The Analyzer can be deployed on premises (without internet dependency) or on a public/hybrid cloud. We also provide a shared SAAS platform. The Mobile App is available on both Android and iOS that can perform quality & latency “spot checks” and, with access to location data, generate dynamic QoS heatmaps.



Real-time Monitoring

The **Analyzer™** includes a set of pre-defined real-time dashboards offering multiple indicators (KPIs) and detailed metrics on network quality and latency for any time periods (last minute, hour, day, week, month). Dashboards are built using Grafana™ open-source tool allowing easy customizations.

The summary dashboard displays the aggregated application and network KPIs (latency, throughput, reliability) plus volatility & network stability scores. Detailed latencies dashboard present latency results per network and IP protocols.

AI-based Advanced Analytics

The **Analyzer** also comes with real-time advanced analytics to help you better understand and predict network latency variations.

Short term latency forecasts helps anticipate network issues and will generate alarms if predicted latency is above expected levels. Real-time anomaly detection highlights abnormal network events can send alarms to the connected equipment, orchestrator or an operations support system. Contact us for info on our AI-based diagnostics and Traffic Shaper.

Technical Specifications

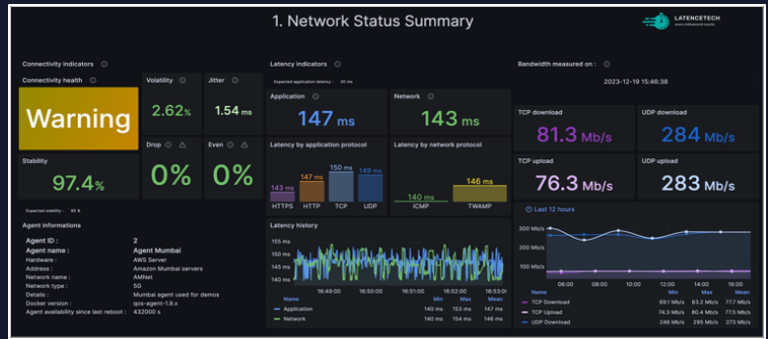
All solutions components are packaged as easily deployable software containers. A limited & configurable set of ports needs to be opened on the Reflector & Analyzer. Typical measurement sampling rate is every 2 seconds but configurable as low as 100ms. Data consumption per QoS Agent (excluding bandwidth tests), using typical sampling, averages 50Mb per day when used continuously. Host requirements chart:

Latence Technologies Inc.

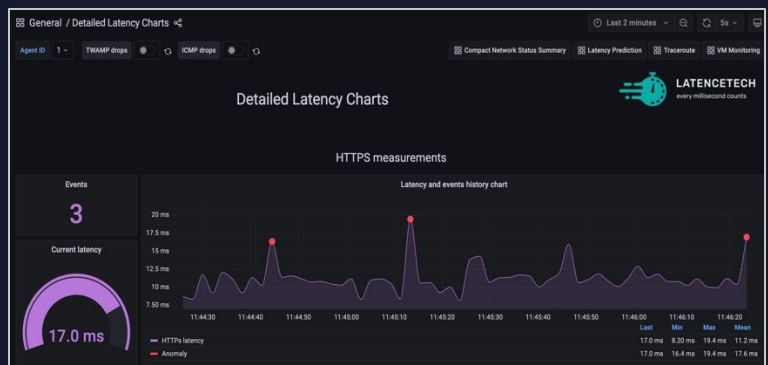
400 Montfort St., office M-2330
 Montreal (Quebec) Canada H3C 4J9
 Tel.: +1 438 399-7009
www.latencetech.com
contact@latencetech.com

HOST	CPU	RAM	SPACE	IOPS
QoS-agent	1	Memory footprint : 20 Mb Recommended RAM : 40 Mb	Image size on disk : 40 Mb Recommended disk : 50 Mb	n/a
Reflector	1	Memory footprint : 10 Mb Recommended RAM : 20 Mb	Image size on disk : 27 Mb Recommended disk : 40 Mb	n/a
Analyzer (small)	1	Memory footprint : 2.32 Gb Recommended RAM : 4 Gb + 0.1 Gb by agent	Image size on disk : 9.95 Gb Recommended disk : 20 Gb	1000+
Analyzer (medium)	2	Memory footprint : 2.32 Gb Recommended RAM : 8 Gb + 0.1 Gb by agent	Image size on disk : 9.95 Gb Recommended disk : 50 Gb	1000+

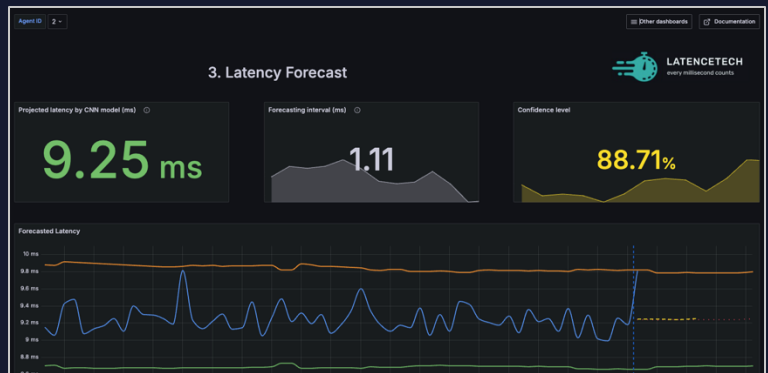
Summary Dashboard



Summary Dashboard with real-time KPIs



Detailed Latencies per protocol with anomaly detection



Forecasted Latencies for next +30s + 90s

