



ANTS - Automatic Network Test System

Service Assurance – Corporate Use Case



**nts**
are everywhere



Service Assurance – Corporate Use Case

Telco services: a competitive advantage, if quality and reliability are guaranteed...

In a highly competitive and rapidly evolving context, it is **essential** for Operators in the corporate market segment to differentiate their offer in the acquisition phase and, subsequently, in the retention activities for their customers highlighting all the advantages of their offer.

Quality of Service is a consolidated indicator that is closely related to customer preferences, particularly in the business segment. Corporates today need to monitor their communication services, voice and data, as they become more and more a critical part of their business process.

The monitoring of performances with E2E active test, and the services offered by ANTS, allow the Operator to guarantee, within any offer, levels of excellence in the Quality delivered in an ever-expanding portfolio of services.

In such a scenario, Quality of Service (QoS) management has become mission-critical also for Corporate organizations that must meet stringent QoS targets and monitor the Service Level Agreements (SLAs) they agreed with their providers with objective performance indicators.

Automatic testing can play an integral role in overcoming these challenges both for Telco Operators and Corporate Organizations, being powerful enough to handle complex services scenarios while at the same time agile to rapidly adapt to new services.

ANTS is a proven solution enabling the implementation of agile and industrial process to verify Service Quality via End-to-End testing with the capability to analyze this information from different perspectives.

ANTS - Automatic Network Test System will support in getting an objective picture of your Service Quality Level.

Considering both Voice or Data, ANTS will enable monitoring and troubleshooting of service reliability and performance.

ANTS in addition grants you for interoperability with any fixed or wireless network.

ANTS UBIQUITOUS END-TO-END TESTING

The ANTS for Service Assurance End-to-End testing solution enables Operators to verify the QoS delivered to their Corporate Customers by their network and service infrastructure.

From Corporate perspective ANTS enables the monitoring and troubleshooting of communication service, voice and data, now fully integrated in their business process organization.

Tests are available from pre-built libraries or designed by the Users without needing knowledge of the test infrastructure topology. With a few clicks, tests can be instantaneously run or scheduled for a later date, once or periodically, on a subset of network elements and user profiles. The scheduling and resource management engine then seamlessly coordinates the execution across the Remote Test Units (RTU) deployed throughout the network.

All call destinations (inbound, outbound) and services including Voice, SMS, video, web navigation, contents download/streaming, OTT and IVR/VAS are supported with all access technologies (GSM, GPRS, Edge, 3G, 4G+, 5G, IoT, PSTN, ISDN, LAN, WiFi, etc.). New services testing is enabled by the Remote Test Units (RTU) including VoLTE, VoWiFi, RCS reproducing customers' real-life use conditions.

Troubleshooting

Enabling **reproduction & further analysis** of detected problem

Intensive **ad-hoc active testing + advanced diagnostic info** (traces)



Validation

Non regression verification, when conducting maintenance operations, extending or improving coverage, launching new services...

Pre-built & user-defined functional tests campaigns with extensive service coverage



24x7 Monitoring

100% automated, periodic test execution process evaluates Quality of Service from the customer perspective (QoE)

Pre-built test scenarios and controls (KPI/KQI)



FROM MEASURES TO KEY PERFORMANCE INDICATORS

- The test progress is displayed on an animated flow chart, including the measures collected (check points, counters, timers) and traces generated for troubleshooting purposes.
- Standard and user-defined Key Performance/Quality Indicators (KPI/KQI) are evaluated on collected measures including Service Availability, Accessibility, Integrity, Retainability
- Alarms are raised when KPI/KQIs exceed specific preset thresholds

Test results are also available offline for many different interactive analyses to diagnose potential issues and produce reports that monitor the actual QoS performance against engagements towards Corporates' customers and partners.

CORPORATE USE CASES OPPORTUNITIES AND BENEFITS

The objective of the proposed solution is to monitor the availability and quality of service, that can be offered as an added value to Corporate customers with geographically distributed offices in several different countries.

Adopted by Corporate organizations ANTS is able to automatically generate Alarm and reports to IT operations, and forward them to a list of recipients, if the values of specific KPIs exceed the predefined thresholds for service levels.

In this way, ANTS ensures that services, which are critical for companies, are always available with the expected and agreed quality levels.

ANTS also records specific traces for the «Alarmed» scenarios allowing to reproduce the malfunction, to investigate the detailed information and, at the end, to verify that the solution adopted is really effective.

ANTS use cases and benefits

Voice Services

- Ability to call within or outside your network
- Ability to receive calls from contacts within or outside your network
- Evaluate your speech quality and identify occurring impairments
- Understand your call drop reasons

Over all technologies from pstn, isdn, VoIP, and mobile wireless from 2G to VoLTE and 5G

Data Services

- Availability of data connection (intranet and internet)
- Throughput measurements up-link and down-link
- Packet delay
- Jitter

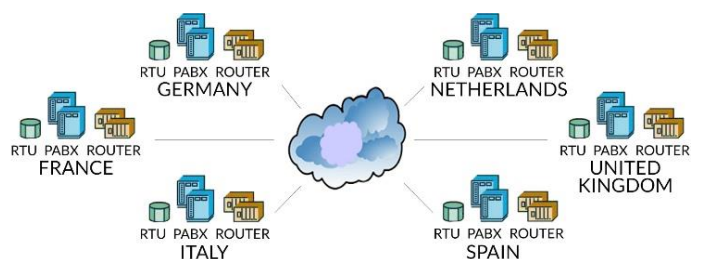
Over all technologies for ethernet and wireless connections from 2G to 4G+, 5G and IoT

Value-added Services KPIs (voice mail, IVR navigation, repository, cloud...)

- Service availability
- Service continuity
- Service quality

A CASE EXAMPLE

Corporate-One buys worldwide connectivity from International Carriers to interconnect its geographical locations. This connection combines different local Operators that provide voice and data services to internal Corporate-One users. The connection of the different locations is a mission critical aspects for the Corporate business.



The objective of ANTS tests on Voice service is to evaluate the availability of the service, reachability to and from the external public network, and voice quality (POLQA-MOS) during the conversation.

The objective of Data service monitoring is to check the availability of the connection and the bandwidth actually available in uplink and downlink together with jitter and delay statistics.