

Assuring the Triple-Play Experience

Broadband services have evolved from simple Internet service to complex transport infrastructure that enables everything from traditional to cutting-edge services. Today's broadband service allows new services such as TV service to extend to multiple devices supporting operators desire to include home security and machine-to-machine (M2M) communications.

As each new service is introduced, the complexity of the network increases. Residential and business customers have high expectations for today's broadband services – video needs to be crisp and clear, Internet data rates need to remain high, and voice must be clear. Perform poorly on any one service and customers leave for another provider, with churn costing money, time and resources.

The NETSCOUT® solution provides operators the end-to-end visibility of Internet Protocol (IP) applications and services. This allows cable operators to confidently deliver new services with the knowledge and insight that these services will enhance the operator's brand.

A Robust Service Assurance Infrastructure

To assure the delivery of IP services to subscribers, an operator needs a global view of the network from the core to through end devices.

A comprehensive view of the cable network allows an operator to see if hardware from a particular vendor or a certain firmware version are having problems. Firmware mismatches between the cable devices and the network can stop a service in its tracks yet identifying a mismatch is difficult and time consuming.

The nGeniusONE® platform allows a cable operator to monitor the data and control plane operations and performance at the network, service enabler, and application level. These service delivery levels are complex, dynamic, and act in unison (Figure 1).

Network

At the network level, the NETSCOUT solution provides visibility into network problems such as firmware mismatch issues on a cable devices, link congestions, capacity issues, load

balancing errors, bandwidth spikes, network configuration problems, firewall issues and broad IP transport problems.

Service

At the service enabler layer, the nGeniusONE platform can detect problems such as authentication and authorization issues, report on billing mediation platforms, and monitor protocols, including RADIUS, Lightweight Directory Access Protocol (LDAP), Dynamic Host Configuration Protocol (DHCP) and Domain Name Server (DNS) protocols at the Authentication, Authorization, and Accounting (AAA) and DNS servers.

Application

At the application layer, the solution provides application and usage visibility by monitoring the Real-Time Messaging Protocol (RTMP), HTTP Live Streaming protocol used for streaming video to TV, tablet and smartphone devices, and proactively alerts on errors or violations against established baselines such as response-time delays, and frozen video, or audio-only video. This enables quick resolution of issues via a seamless integrated workflow to locate the root cause of the problem.

Content Everywhere Deployment Environment – End-to-End View of Network, Service Enablers, Applications

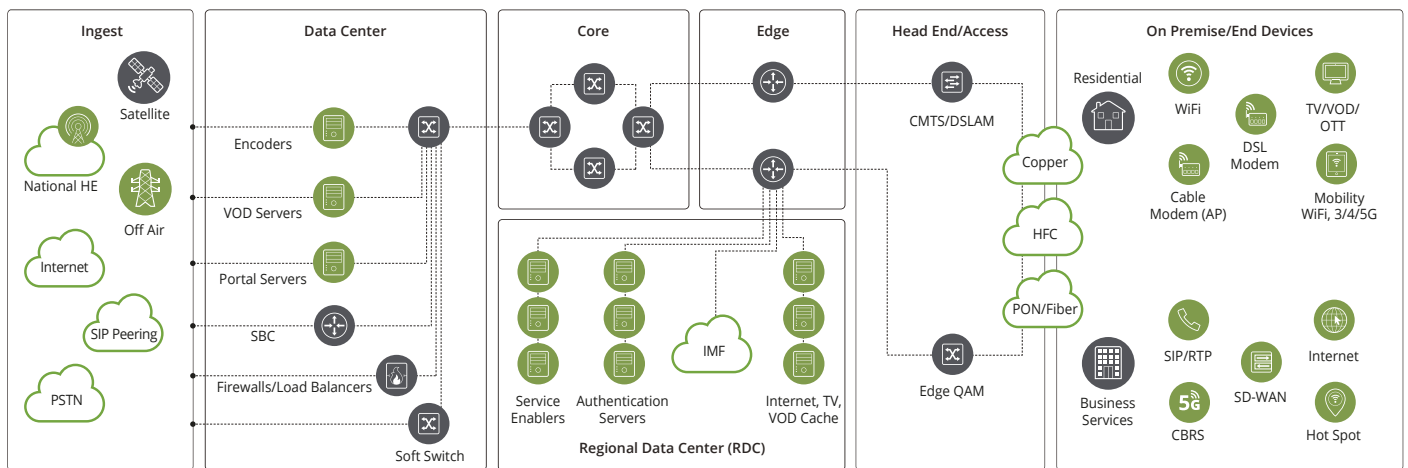


Figure 1: End-to-end view of network, service enablers and applications.



Service Assurance for Cable Networks

The nGeniusONE Service Assurance offering makes it easier to detect which network elements are generating the most delays and errors, highest congestions, and transactions. System users can view detailed response-time analysis on the origination and the Content Delivery Network (CDN) servers and detect anomalous application and server behavior at the portal, origin, segmentation, vault and CDN. The operations team can monitor the delivery of premium services across applications and the network with a proactive approach to prevent service-impacting performance issues.

The platform provides the operations team a unified contextual dashboard view into all the critical service delivery elements required for delivery of premium content services to connected devices including TVs, tablets and smartphones while assuring the delivery of high-quality services for a consistent customer experience. Cable operators can scale and manage the dynamic nature and complexity of IP service delivery with rich protocol analysis.

With the NETSCOUT solution, operators can confidently roll out new services and content over a cable or carrier WiFi infrastructure, protect the user experience and sustain new subscriber acquisition while reducing churn.

Unified Service Delivery Management

The NETSCOUT solution is a highly scalable, unified performance management platform that combines real-time situational awareness, historical analysis, and multi-layered analysis capabilities to enable effective and efficient service delivery management in complex, converged services networks. The solution unites network, service enabler and application performance management to deliver holistic service visibility across application tiers, end-to-end networks, and diverse user devices. The service-oriented workflows enable seamless, contextual transitioning across multiple layers of analysis, facilitating efficient hand off of incident response tasks across the different Network Operations groups.

NETSCOUT's solution streamlines service delivery management by providing layers that support data, voice and video services with multidimensional reporting and data analytics.

- Real-time Service Dashboard provides service visualization with Intelligent Early Warning for proactive service delivery management.
- Network and service performance analysis provides correlated views of key performance metrics of the signaling bearer and enabler components from access, core and service networks.
- Session analysis enables session-level subscriber analysis with hop-by-hop transaction analysis.
- Deep-dive packet analysis enables protocol-level analysis and forensic evidence collection.

Leveraging an advanced, highly scalable architecture, the solution delivers powerful capabilities, including:

- Single performance management platform supporting multi-technology, multi-service networks for data, voice and video services.
- Real-time correlated data plane and control plane monitoring and analysis for voice, video and data traffic.
- Modern, service-oriented workflows support proactive and reactive management activities to quickly identify, triage and resolve performance incidents.

The NETSCOUT Advantage

The nGeniusONE service assurance solution unifies multiple analysis views into a single pane of glass providing an integrated analysis architecture that simplifies and streamline performance management activities. The most demanding cable networks in the world trust NETSCOUT Service Assurance and Analytics Solutions to deliver greater insight and assure the performance, availability and quality of network and services.

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