

Service Assurance in City Government



Digital initiatives are driving the need for expanded Service Assurance solutions in City Government, involving diverse projects that include Internet of Things (IoT), data center transformation, open government, civic engagement, and “Smart City” projects. Such initiatives can enhance the local landscape of civic service delivery to residents and offer the potential of using digital applications to deliver City services more efficiently and inexpensively.

Regardless of the digital initiative’s focus, there are accompanying needs to pilot new projects, ensure availability and responsiveness of those services to local employees and residents (for both digital initiatives and legacy services), and then provide ongoing service assurance once systems are in production. Otherwise, initially enthusiastic users (e.g., residents, business owners, City employees) can get discouraged when websites experience errors, updated 3-1-1 Contact Centers cannot be quickly engaged, or the “no-longer-new” civic Wi-Fi service is slow and unsecure.

At the same time, service assurance solutions are required for the day-to-day delivery of ongoing City services, including managing network, application, and

Unified Communications & Collaboration (UC&C) platforms supporting schools, emergency services, public works, and the local government infrastructure itself. For first responder services, in particular, any unexpected service downtime or delay can present dire results.

Our Approach

NETSCOUT® technology provides City information technology (IT) teams with the solutions needed to ensure successful digital initiative pilot phases and ongoing service assurance of production systems, with our nGeniusONE® Service Assurance platform delivering end-to-end network visibility, always-on monitoring (for networks, applications, and UC&C technology), and intuitive troubleshooting required to reduce mean-time-to-repair (MTTR).

With NETSCOUT’s patented Adaptive Service Intelligence™ (ASI) technology transforming network packet data into “smart data” in real time to fuel nGeniusONE’s performance analytics, our solution helps City IT teams ensure security, manage risk, facilitate superior decision making, and drive service

delivery through automation and pervasive deployment. Our solution also leverages NetFlow to complement our core InfiniStreamNG™ (ISNG) software and hardware appliance technology, with NetFlow converted to NETSCOUT smart data for nGeniusONE performance analytics.

Our Solutions

NETSCOUT Service Assurance solutions are used today to help leading Cities successfully deploy and securely manage digital transformation projects, whether based on wired, wireless, cloud, or virtual network services and infrastructure elements.

In providing service assurance solutions required for both digital initiatives and ongoing City service delivery operations, our nGeniusONE platform provides continuous, real-time monitoring that IT teams need to adopt a services-oriented approach toward ensuring critical municipal and business services (reliant on network, voice, video, email, mobile platforms) are both available and performing at high levels.

The nGeniusONE platform leverages NETSCOUT smart data for real-time visibility required for comprehensive analysis of service performance across complex N-tier application environments. The combination of smart data and superior analytics allows City IT professionals to understand the full context of application services and the anomalies contributing to poor user experience or application performance.

While nGeniusONE today supports City customers’ efforts to transform IT operations, our solution also provides a single solution for day-to-day service assurance for City services, including:

- Pinpointing the cause of slow-downs in services delivered to residents (e.g., real-estate transactions, online payment of water/sewer and auto/personal tax bills).

- Identifying performance issues in commercial (e.g., Microsoft Office 365, Citrix) and custom applications supporting City employee scheduling, payroll, communications, or school department budgeting systems.
- Troubleshooting email and VoIP/voice environment issues within City data centers and remote office locations.

nGeniusONE provides intuitive workflows and drill downs service dependency maps and session analysis to quickly identify the impacted user communities and what is causing the slowdown. The nGeniusONE solution is assisting City IT teams to implement and monitor the digital initiative projects described in the subsections that follow.

Cloud Migration Support

For Cities migrating to the cloud to maximize staff efficiency and service delivery while reducing OPEX, the nGeniusONE platform provides visibility across the entire stack (including interdependencies for the application and service delivery infrastructure), also leveraging NETSCOUT's pervasive vSTREAM™ virtual instrumentation for cloud environments. With NETSCOUT, City IT teams can cost-effectively monitor and assure their cloud and virtual platform transformations before, during, and after migration, regardless of the strategy (e.g., private, public, or multi-cloud) or vendor technology (e.g., AWS, Microsoft Azure, Google Cloud, or VMware NSX) utilized.

Contact Center Transformation Support

In addressing the needs of numerous 9-1-1 Contact Center enhancements (e.g., consolidation services, expansions) and new 3-1-1 programs (e.g., Web-based and mobile options for non-emergency service requests), nGeniusONE with ASI analyzes network traffic in real-time and generates highly scalable NETSCOUT smart data that enables a comprehensive view of UC&C services, network, application, and server performance across a City's voice and video environment.

IoT Project Support

For Smart Cities projects relying on IoT infrastructure deployments (e.g., "smart" light grids, traffic light sensors to improve congestion during road emergencies), nGeniusONE provides visibility into the interoperability of IoT platforms, protocols, applications, and services, providing real-time insight into device, network, and cloud behavior. Our troubleshooting approach gives early warning to configuration, responsiveness, and errors, which translates into fewer customer complaints and faster problem solving. Our ASI technology uses a scalable, multidimensional metadata model to produce a rich smart data that represents an end-to-end view across IoT devices, networks, services, and applications, no matter where they operate.

Data Center Transformation Support

With City IT teams looking to transform data center operations by implementing software-defined networking (SDN) solutions, such as Cisco Application Centric Infrastructure (ACI), there are new requirements for "before-and-after" visibility and performance monitoring. NETSCOUT's ISNG software and hardware appliance and vSTREAM virtual appliance technologies provide IT teams with smart visibility across these new data center environments, including Cisco ACI and VMware NSX SDN, hybrid cloud, and co-located services. With nGeniusONE leveraging this visibility, IT teams are provided with an all-in-one real-time monitoring solution that helps accelerate their data center transformations. In addition, NETSCOUT's nGenius Packet Flow Switch technology delivers complete network visibility, while simplifying and streamlining Data Center monitoring architectures and reducing risk to the network.

Complementary NETSCOUT Solutions

In addition, Arbor Networks, the security division of NETSCOUT, provides cybersecurity solutions that complement NETSCOUT's Service Assurance portfolio, including:

- **Arbor Edge Defense (AED)** – A DDoS protection solution for cybersecurity teams that acts as first- and last-tine defense for the organization.
- **Arbor Cloud DDoS Protection for Enterprise** – Combines on-premise AED DDoS defense with global cloud-based traffic scrubbing services for best of breed, hybrid, DDoS attack protection.
- **Arbor Threat Analytics (ATA)** – An enterprise-wide network threat and risk investigation solution that helps reduce the impact of cyberthreats on the business.
- **Arbor Networks Spectrum™** – When combined with our ISNG software and hardware appliances, Spectrum provides a high-performance network threat analytics platform that helps IT reduce the "time to know" critical threats are already inside the organization.

Our Value to City Government

NETSCOUT Service Assurance solutions enable City Government IT organizations to:

- Reduce MTTR to pinpoint source of slow-downs in City services that impact employee productivity and/or citizen services.
- Successfully pilot and implement digital initiatives and migrate associated platforms with confidence, including monitoring before, during, and after deployment to assess network, application, and UC&C technology performance impacts.
- For IoT deployments, monitor protocols, network, and cloud applications to assure performance synchronization.
- Vendor-agnostically visualize multiple third-party applications operating across expanded City network environments.
- For 9-1-1 and 3-1-1 service transformations, ensure efficient resident interactions through the cloud, Web portals, and mobile application layers.



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