

NETSCOUT RECEIVES THE 2023 COMPANY OF THE YEAR AWARD

*Identified as best in class in the global wireless
network monitoring/service assurance industry*



Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each award category before determining the final award recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. NETSCOUT excels in many of the criteria in the wireless network monitoring/service assurance space.

AWARD CRITERIA	
<i>Visionary Innovation & Performance</i>	<i>Customer Impact</i>
Addressing Unmet Needs	Price/Performance Value
Visionary Scenarios Through Mega Trends	Customer Purchase Experience
Implementation of Best Practices	Customer Ownership Experience
Leadership Focus	Customer Service Experience
Financial Performance	Brand Equity

A Market Snapshot

Data centers are becoming more cloud-centric due to the increase in demand for data and the need for scalability, cost efficiency, and flexibility, enabling services located near the end-user for low latency. The convergence of large network infrastructure and highly sensitive cloud and hybrid cloud networks drives the requirement for next-generation network performance monitoring solutions. Competitive intensity, internal challenges, and geopolitical chaos are some of the key issues that market participants must overcome to ensure high growth.

With the introduction of fifth-generation (5G) technology, network virtualization, Open Radio Access Network architecture (O-RAN), and autonomous networks, the cellular wireless network industry is changing rapidly. As providers prepare for the widespread deployment of 5G services, the network infrastructure will accelerate. Traditional probe-based monitoring solutions are no longer sufficient, and pervasive and easy-to-install software solutions are growing in popularity. With the virtualization of the network core and Radio Access Network (RAN), private wireless networks on the cloud will require efficient monitoring and validation solutions.

Troubleshooting and automated operations require end-to-end visibility from RAN to the core of the edge, regardless of the type of cloud, network, or workload. Agile monitoring solutions that provide this level of visibility are necessary for efficient and seamless management of these complex network architectures. An end-to-end monitoring platform that is applicable in the lab and field and as a service assurance

solution that offers end users network visibility will be a game changer. Service assurance solutions, such as active and passive monitoring techniques, are essential for visibility across different clouds, applications, and workloads to sustain 5G operations. As the industry continues with the 5G push, adopting cloud-native, container-based technologies, such as Kubernetes, will accelerate virtualization benefits with considerable efficiency. Offering these services over fourth-generation/5G and fixed networks requires communication service providers to address complexity and market fragmentation.

Best Practices Excellence: NETSCOUT

Founded in 1984 and headquartered in Westford, Massachusetts, NETSCOUT Systems (NETSCOUT) is a global leader in wireless network service assurance, DDoS attack protection and cybersecurity solutions for enterprises and communication service providers (CSPs). The company's range of virtual appliances allows customers to extend their application monitoring deeper into their networks and traditional data centers, confidently migrating applications into public cloud environments to gain a comprehensive, cohesive view of hybrid and multi-cloud environments.

NETSCOUT continues to receive high praise for its innovative solutions and commitment to customer success. In 2022, Frost & Sullivan recognized the company for its best practices in monitoring, security, performance assurance, optimization, and network troubleshooting, as well as its customer-centric mindset, and remains impressed with NETSCOUT's continuing innovation and sustained leadership.

Demonstrated Leadership through Continuous Product Innovation

NETSCOUT's vision centers on enabling customers to be "Guardians of the Connected World" through constant and ubiquitous visibility, with the stated purpose of protecting global industry leaders from the risks of network performance disruptions and security problems. Considering this, the company connects

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**- Navdeep Saboo
Industry Analyst**

deep-seated domain and operational knowledge with advanced technology to build application and service-delivery network management and security. NETSCOUT's proven solutions deliver deep insights into critical data, video, and voice services traveling through the modern infrastructure.

5G Standalone

Telecommunications companies face new challenges as they migrate to cloud-native infrastructure with the 5G standalone (SA) architecture. Among these challenges are disaggregated control and user plans, a lack of

visibility into business-critical traffic, and the need to maintain signaling traffic visibility as it moves to a virtual service-based architecture. To address these issues, NETSCOUT developed a multifaceted solution with scalable deep packet inspection that can run on commercial off-the-shelf hardware or in a cloud-native environment. The solution is optimized for the cloud and can deploy within a Kubernetes-managed environment to bring deep visibility to virtual functions. Additionally, the solution provides pre-certified plug-ins that can receive network equipment manufacturer (NEM)-specific virtualized tap (vTap) service-based interface traffic for analytics processing and packet forwarding as needed. This solution allows

telecommunications organizations to eliminate legacy tapping environments, thus reducing their total cost of ownership.

NETSCOUT teamed up with many top NEMs for the last two-and-a-half years, working with packet acquisition, allowing the company to develop a specification that enables CSPs on various fronts, including virtual tap production or receiving traffic from virtual NEMs taps. Frost & Sullivan finds that NETSCOUT's collaborative spirit is a critical foundation of its success. For example, in October 2022, the company collaborated with Ericsson and Swisscom to develop the first-of-its-kind network visibility solution for a cloudified 5G SA network. To gain visibility for Swisscom's 5G SA network, service assurance tools required access to the 3GPP packets that traverse the disaggregated elements in the cloudified network. Ericsson, the infrastructure provider for the network, developed a vTap to provide access to those 3GPP packets.

The joint effort between NETSCOUT and Ericsson enables the recognition of which VNF is producing and consuming the 3GPP traffic, such as the 5G AMF communicating to the SMF function. Moreover, the migration to 5G SA is one of the largest efforts that NETSCOUT has undertaken in the last few years in terms of effort and external collaborations.

Automating Analytics

NETSCOUT's unique blend of artificial intelligence and machine learning algorithms, backed by over 30 years of domain knowledge from service providers worldwide, has delivered a paradigm shift. The company's ASI Smart Data provides actionable business intelligence and drives an intelligent automation engine that runs millions of iterative sequences. The engine can isolate the root issues with the most significant business impact on subscribers and their service quality. Deep outlier detection and cross-correlation through the entire network direct users to the primary and possible secondary issues, providing supporting evidence affecting any part of the monitored network. As a result, customers achieve greater overall efficiency and minimize human error. The system compares possible issues across millions of scenarios, reducing the cost associated with data overload while providing rapid results for prompt resolution.

NETSCOUT built its automated analytics on its proven and scalable nGenius® platform, which unifies best-of-breed technologies such as enterprise visibility and service assurance and analytics. The ability to run these applications on the existing nGenius platform means customers achieve a low-cost/high return on investment, advanced analytics solution. NETSCOUT's automated analytics provide a holistic solution, unlike many competitors that focus solely on what is malfunctioning. Thus, the company's applications identify the problem areas while also focusing on what is working and how services/customers behave.

Service Assurance & Security

Traditionally, NETSCOUT maintained a perimeter perspective regarding its service assurance and security, monitoring traffic coming in and coming out of the network and trying to understand suspicious activity and cyber-attacks. In September 2021, NETSCOUT launched its Adaptive DDoS Protection for its Arbor® Threat Mitigation System and Arbor Edge Defense to enhance the mitigation of the growing number of more sophisticated, dynamic, multi-vector Distributed Denial-of-Service (DDoS) attacks. These attacks leverage different attack tactics and vectors to launch botnet-based direct-path, state exhaustion, and application-layer attacks. These attacks are very dynamic in nature as they continuously change attack

vectors to evade conventional static network and cloud-only-based DDoS defenses. DNS Water Torture and Carpet-bombing attacks have risen more than 353 % and 110% respectively, making it difficult for security teams to mitigate using conventional means. NETSCOUT ML-based, Adaptive DDoS protection solution continuously analyzes dynamic DDoS attack traffic and automatically makes recommends countermeasures recommendations to stop them.

NETSCOUT's pervasive security model provides a holistic approach to security and relies on end-to-end visibility into the entire service delivery stack, offering insights into both service performance management and security. In early 2023, NETSCOUT released their MobileStream and Arbor Sightline mobile which visibility into 4G/5G user and data plane traffic to detect malicious and non-malicious threats that impact the available of 4G/4G services and subscriber experience. The best approach to augmenting a layered security strategy and assuring the performance, confidentiality, integrity, and availability of aservice provider's, mobile network operators's or enterprise's information and services is pervasive security. Some of the key products include nGenius®ONE Situation Analysis, nGeniusONE Forensic Analysis, and nGenius Packet Flow Switches. In October 2023, NETSCOUT made waves by achieving AWS Security Competency for Omnis® Cyber Intelligence, Amazon's Network Detection and Response product.

With a legacy of market leadership, the company's compelling value proposition underpins its sustained success. Frost & Sullivan commends NETSCOUT for its best-in-class technology.

Optimization at Regular Intervals

NETSCOUT initiates regular improvements to its products and services, ensuring optimal performance. One of the company's most recent examples is its RAN Analytics for Carrier Aggregation (NETSCOUT TrueCall Analytics). This innovative solution gives mobile operators unique insights into carrier

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**- Samantha Fisher
Best Practices Research Analyst**

aggregation patterns, helping them gain access to a unique dataset that delivers a combination view of handsets, cell CA performance, and RF conditions across the network.

Determining the root cause for problems is traditionally a manual process; however, NETSCOUT RAN Analytics automates root cause analysis and gains the visibility needed to identify, investigate, and resolve performance issues, accelerating the return on their investments.

NETSCOUT RAN Analytics enables mobile operators to address their carrier aggregation approach's viability and performance, including usage, performance, efficacy, and quality. This powerful capability provides operators with a deep understanding of the network. The vendor-agnostic solution is 3GPP-compliant and leverages NETSCOUT's Smart Data, making it highly suitable for networks of any size and any stage in the 5G lifecycle. The data is also available for export to O-RAN automation systems, data lakes, and other third-party systems using a robust, industry-standard interface.

Building Trust through a Customer-centric Approach

NETSCOUT's customer-centric approach goes beyond its extensive expertise and best-in-class capabilities, with customer value as a strategic imperative. Through the years, the company has earned a sterling reputation, supporting its customers' path toward reliability, connectivity, and security. The company's solutions cover everything in the entire product lifecycle, from early stages to office to ongoing optimization. To this end, NETSCOUT offers two types of service: post-sales support/service and Visibility-as-a-Service (VaaS), and the company's emerging Monitoring-as-a-Service (MaaS) offerings. VaaS is a 24/7 proactive monitoring and managed information technology service for NETSCOUT network and application performance management (APM) solutions, whereas MaaS will take application monitoring to the next level. More importantly, these services cover anything, whether it be hardware, software, or the cloud; NETSCOUT's MaaS and VaaS bumps performance up higher, ensuring ongoing satisfaction. This customer-centricity also includes the cost structure as a value proposition, as NETSCOUT offers various purchase options, including a multi-year contract and subscription service, enabling each customer to choose what is best for their network.

Unlike many competitors, NETSCOUT builds its technology by collaborating closely with a range of stakeholders and partners to evolve alongside market needs and trends. Specifically, the company relies on customer feedback via surveys and its customer board to understand current and rising industry needs. The company offers an extensive program called myNETSCOUT that enables users to log in and learn industry best practices, receive training, locate specific use cases, and discover different support avenues. Moreover, NETSCOUT formed a community board, which contains a global cross-section of its customers. The company continuously prioritizes and invests in its customers, as it hosts a customer engagement event once a month where NETSCOUT's executive team meets with customers to gather feedback.

Solid Financial Performance Spurs Growth Momentum

NETSCOUT has built a strong reputation and customer-centric framework since its inception, leading to its coveted preferred partner status. Over the years, the company has added several new customers to its already established base. Moreover, in fiscal year 2023, NETSCOUT generated a total fourth-quarter revenue of \$208.1 million, indicating a 7% revenue growth year-over-year compared to \$191.2 million in the fourth quarter of fiscal year 2022. The total revenue for the full fiscal year 2023 was \$914.5 million, higher than the \$855.6 million generated in 2022. In 2022, Frost & Sullivan identified NETSCOUT as the global network and APM market leader, with an 8.0% market share. The company's high-growth potential is attributed to its industry-leading product portfolio that provides tremendous value in high-demand sectors, such as telecommunications, insurance, manufacturing, pharmaceutical, retail, government, healthcare, and financial services. Overall, Frost & Sullivan finds NETSCOUT's impressive growth momentum and trajectory are a testament to its product leadership, earning its clients' trust and loyalty and enabling it to capture more market share.

Conclusion

With the introduction of fifth-generation technology (5G), network virtualization, Open Radio Access Network architecture, and autonomous networks, the wireless network industry is changing rapidly. However, with incomplete visibility into their networks, many communications service providers struggle with troubleshooting and automating operations. Overall, NETSCOUT Systems (NETSCOUT) addresses this challenge with a strong leadership focus that incorporates customer-centric strategies and exemplifies best practice implementation. The company's continuous innovation offers best-in-class solutions in response to existing and emerging challenges, including 5G standalone, automated analytics, service assurance, and rigorous security. The company remains a trusted partner, earning an iron-clad reputation for offering the overall best in the market.

With its strong overall performance, NETSCOUT earns Frost & Sullivan's 2023 Global Company of the Year Award in the wireless network monitoring/service assurance industry.

What You Need to Know about the Company of the Year Recognition

Frost & Sullivan's Company of the Year Award is its top honor and recognizes the market participant that exemplifies visionary innovation, market-leading performance, and unmatched customer care.

Best Practices Award Analysis

For the Company of the Year Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Visionary Innovation & Performance

Addressing Unmet Needs: Customers' unmet or under-served needs are unearthed and addressed by a robust solution development process

Visionary Scenarios Through Mega Trends:

Long-range, macro-level scenarios are incorporated into the innovation strategy through the use of Mega Trends, thereby enabling first-to-market solutions and new growth opportunities

Leadership Focus: Company focuses on building a leadership position in core markets and on creating stiff barriers to entry for new competitors

Best Practices Implementation: Best-in-class implementation is characterized by processes, tools, or activities that generate a consistent and repeatable level of success

Financial Performance: Strong overall business performance is achieved in terms of revenue, revenue growth, operating margin, and other key financial metrics

Customer Impact

Price/Performance Value: Products or services provide the best value for the price compared to similar market offerings

Customer Purchase Experience: Quality of the purchase experience assures customers that they are buying the optimal solution for addressing their unique needs and constraints

Customer Ownership Experience: Customers proudly own the company's product or service and have a positive experience throughout the life of the product or service

Customer Service Experience: Customer service is accessible, fast, stress-free, and high quality

Brand Equity: Customers perceive the brand positively and exhibit high brand loyalty

About Frost & Sullivan

Frost & Sullivan is the Growth Pipeline Company™. We power our clients to a future shaped by growth. Our Growth Pipeline as a Service™ provides the CEO and the CEO's growth team with a continuous and rigorous platform of growth opportunities, ensuring long-term success. To achieve positive outcomes, our team leverages over 60 years of experience, coaching organizations of all types and sizes across 6 continents with our proven best practices. To power your Growth Pipeline future, visit Frost & Sullivan at <http://www.frost.com>.

The Growth Pipeline Engine™

Frost & Sullivan's proprietary model to systematically create ongoing growth opportunities and strategies for our clients is fuelled by the Innovation Generator™.

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Key Impacts:

- **Growth Pipeline:** Continuous Flow of Growth Opportunities
- **Growth Strategies:** Proven Best Practices
- **Innovation Culture:** Optimized Customer Experience
- **ROI & Margin:** Implementation Excellence
- **Transformational Growth:** Industry Leadership



The Innovation Generator™

Our 6 analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.

Analytical Perspectives:

- **Mega Trend (MT)**
- **Business Model (BM)**
- **Technology (TE)**
- **Industries (IN)**
- **Customer (CU)**
- **Geographies (GE)**

