

## Service Assurance in Manufacturing



Increased worldwide competitive pressure is driving digital transformation in manufacturing businesses. The goal of the transformation is to integrate application services throughout the entire process from initial design and production through selling, shipping, and billing to increase efficiencies and both product and service quality. While integrated application services and solutions facilitate necessary increases in efficiency and quality, they also add a level of complexity and must be managed to ensure these services and solutions are running at peak efficiency.

*“To survive, industrial firms must close the gap between their familiar IT systems and the complex, expensive, and often proprietary systems driving factories, supply chains, and manufacturing processes.”<sup>1</sup>*

<sup>1</sup> Miller, Paul. 4/24/2019 “From Grease to Code: Industrial Giants Must Bet Their Futures on Software.” Forrester

IT services such as Material Requirements Planning (MRP), Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), and others are already integrated throughout the end-to-end business processes. They are becoming even more prolific as manufacturers continue to adopt trends such as Smart Manufacturing, wireless communications on manufacturing lines, and integration of Industrial Internet of Things (IIoT) to increase competitiveness.

Manufacturers also rely on applications driving the sales, shipping and billing processes. Sales, CRM, inventory, web-based tracking and shipping issues can cause backups in the warehouse leading to production delays, just as easily as production delays can impact sales and shipments. In addition, Unified Communications and Collaboration (UC&C) tools are used more and more in call centers for customer and partner communication. These complex tools must be operating at peak efficiency as poor communication infrastructures have proven to cause customer satisfaction issues.

With manufacturing businesses relying so heavily on IT service delivery and the

coordination of the entire process from production to sales, service, shipping, and billing, they must ensure the availability and performance of these IT services.

Otherwise, significant inefficiencies are introduced causing revenue and profitability to suffer. NETSCOUT® provides the end-to-end service assurance required to drive business success in manufacturing.

### Our Approach

NETSCOUT’s approach to business assurance is built on a foundation of high-quality data and real-time analytics providing visibility across any service, any platform, any time. Based on network traffic, NETSCOUT’s patented Adaptive Service Intelligence™ (ASI) deep-packet inspection technology provides the most robust data source available to ensure services are delivered by measuring the actual transactions and dependencies of the service. NETSCOUT analytics are the industry leading standard for scalability and ease-of-use, enabling proactive service triage to keep combined aspects of the manufacturing process running smoothly end-to-end. Leveraging ASI, the nGeniusONE® Service Assurance platform delivers unmatched capabilities that ensure the reliable and uninterrupted delivery of critical application services ensuring they do not cause process delays or quality issues.

The benefit of this approach is getting the right information to the right people at the right time, delivering the fastest Mean Time to Resolution (MTTR) for any issues that may arise. Logical, intuitive workflows have been developed with data reduction in mind to reduce the mountain of data and statistics found in high volume, globally distributed, complex IP networks down to actionable intelligence generated from NETSCOUT Smart Data. By minimizing noise and maximizing essential information, IT organizations have greater effectiveness in troubleshooting complex service-impacting issues with the NETSCOUT solutions.

## Our Solutions

NETSCOUT delivers solutions that support both wired and Wi-Fi infrastructures, including the infrastructure serving IIoT, in manufacturing organizations. For wired environments, the nGeniusONE platform provides unrivaled visibility into IP-based services along with contextual workflows to speed problem resolution that is both easy for Level 1 responders to use and powerful for an expert to operate. The nGeniusONE platform delivers real-time performance metrics including Key Performance Indicators (KPIs) from analysis of traffic utilization, application and database servers and network errors.

For Wi-Fi environments, NETSCOUT nGenius®PULSE supports advanced service testing over Wi-Fi and Ethernet connections that provides IT a way to compare the trended results for fault isolation and determine if any service impact is, or is not, due to Wi-Fi. Tests can measure the difference in latency over Wi-Fi and Ethernet and help identify the cause of the issue as the Wi-Fi network, a device or the wired network.

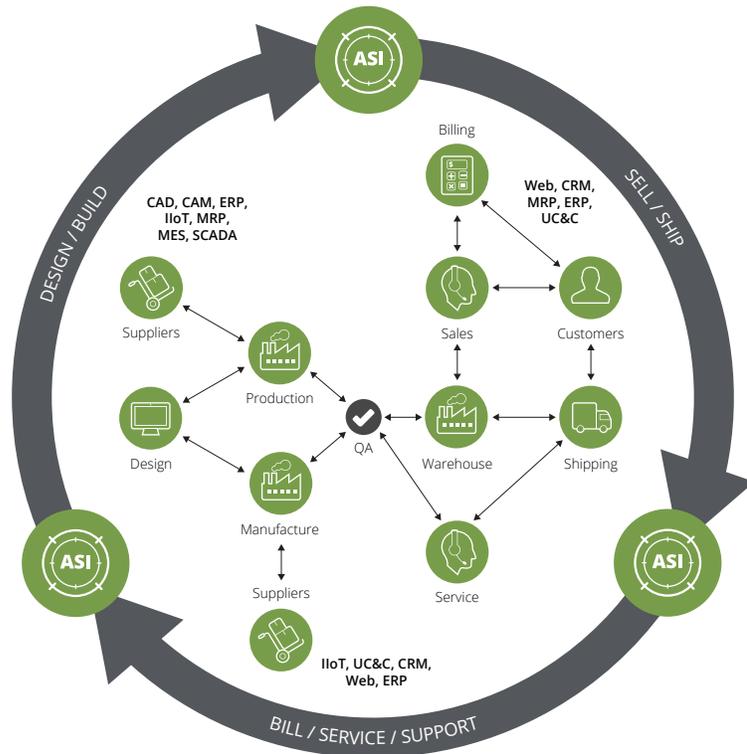
Rather than look at individual elements in isolation, nGeniusONE provides end-to-end visibility into the performance of the components associated with service delivery whether on a single site, distributed across multiple sites, or in cloud/hybrid cloud environments. This exposes underlying service dependencies between such services as Manufacturing Execution Systems (MES), Supervisory Control and Data Acquisition (SCADA), ERP, CAD/CAM and CRM, along with the individual application servers, their backend databases, and the necessary service enablers such as DNS, DHCP, and authentication like LDAP, Active Directory, or RADIUS. This helps IT operations more effectively manage health, availability and any process issues, improving the teams' ability to proactively identify the root cause of problems.

## Our Value to Manufacturing Organizations

For manufacturing organizations, NETSCOUT solutions are designed to ensure the IT services supporting business processes from production to sales, shipping, and billing run smoothly through proactive service assurance. If problems do arise, NETSCOUT solutions ensure the proper information is available to troubleshoot quickly and keep the business moving. With NETSCOUT, manufacturing organizations can:

- Plan for success as new transformative manufacturing and data center technologies are built and introduced
- Reduce operational costs and complexity with broad reach and use by IT

- Provide smooth evolution into new applications and Smart Manufacturing processes that leverage IIoT
- Ensure efficient operation of over 1000 voice, video and data applications including MES, SCADA, ERP, CAD/CAM and CRM services whether they are deployed in local data centers, hybrid or public cloud
- Proactively triage and reduce MTTR for issues contained to a single site or across many sites including outsourced manufacturing
- Solve problems quickly to maintain efficient production, sales, shipping, billing, and service and support operations
- Reduce costly downtime caused by business affecting service degradations across the enterprise, in the data centers, or in manufacturing plants



**Figure 1: The entire manufacturing process from production through sales, shipping, and billing relies on IT services for efficiency and quality. Any degradation can have significant impact on the business. NETSCOUT delivers service assurance for the entire end-to-end process to help maintain competitiveness, revenue and profit.**



**Corporate Headquarters**  
 NETSCOUT Systems, Inc.  
 Westford, MA 01886-4105  
 Phone: +1 978-614-4000  
[www.netscout.com](http://www.netscout.com)

**Sales Information**  
 Toll Free US: 800-309-4804  
 (International numbers below)

**Product Support**  
 Toll Free US: 888-357-7667  
 (International numbers below)

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