

## nGeniusPULSE for Wan Bandwidth Measurement

Wide area network (WAN) bandwidth has always been a balancing act for IT organizations because it is so important in delivering services to their end users in primary headquarters offices, accessing data centers, and for their regional and remote branch offices and employees. Too much bandwidth, and companies overspend their budgets; too little bandwidth, and users experience slowdowns.

Companies understand this balancing act and have worked hard to gain visibility into utilization trends across WAN links to best ensure traffic volumes meet the bandwidth available, while proactively planning with their service providers to upgrade circuits before users experience bottlenecks. Confirming that the contracted bandwidth is available at each location can be just as important.

### Performance Issue

When companies contract with their service providers for agreed-to bandwidth at their locations, that defined range is established to meet the needs of the business, both for the expected utilization and the budgeted costs. As a banking organization that had increased their staffing remotely, the institution's application bandwidth requirements had likewise expanded, which necessitated bandwidth upgrades across the region in dozens of locations. As IT completed the upgrades at some of the offices, rather than realizing the swift access to corporate resources that was desired, the employees continued to report significant slowness in network access and poor performance in banking applications.

### Impact

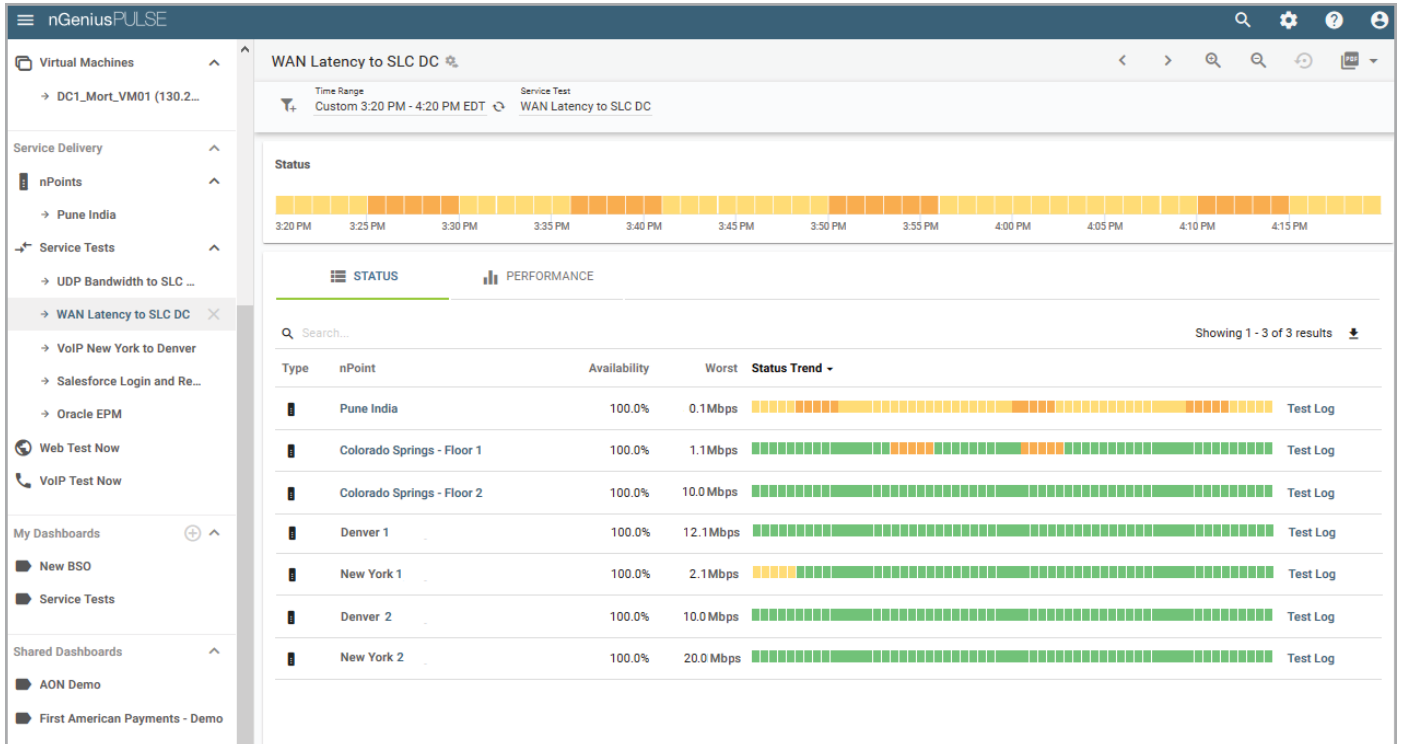
The immediate impact of the slow access and poor application performance was employee complaints from the branch locations. They were frustrated and losing time waiting for response from the data center, and their productivity was suffering. And they weren't the only ones, as IT staff was losing time attempting to understand the cause of the slowness, given they had just added bandwidth to the very locations complaining.

However, beyond the employee impact, many times, it had a more concerning effect on customers at the branch banking offices trying to conduct business – make deposits, open accounts, pay mortgages and apply for loans. Slowness impacted customers' perceptions of the bank, which in turn increased the potential of those clients taking their business to more efficient institutions.

### Troubleshooting

The bank had the advantage of NETSCOUT® service assurance solutions deployed in their IT environment and leveraged NETSCOUT's Premium Services for expertise on these solutions to help understand the source of the issue at hand. They resourced the bank's implementation of nGenius®PULSE, part of the nGenius Service Assurance portfolio that provides end-to-end network visibility to evaluate the available WAN circuit bandwidth and performance from the remote branches' perspective. With always-on, automated analysis for cloud, hybrid, and virtual environments, evaluating user experience and isolating issues between locations and service providers is easy and repeatable with nGeniusPULSE.

For this particular problem, nGeniusPULSE was able to monitor data transfer rates between nPoints (hardware and virtual) deployed at the branches and servers that were running iPerf tool to test the upload and download bandwidth available. The tests were set to run every 10 minutes for 5 seconds at a time. In performing this test over several of the branch bank circuits recently upgraded, it identified a few locations where they were not running at the new bandwidth speeds post upgrade.



**Figure 1: The automated tests in nGeniusPULSE performed between nPoints at branch offices and iPerf servers uncovered a few locations where the bandwidth delivered did not meet the contracted speeds. Pune India, Colorado Springs – Floor 1, and New York 1 were all under the contracted speeds.**

### Remediation

The nGeniusPULSE test results were conclusive - automated tests performed between nPoints at branch offices and the bank's iPerf servers uncovered a few locations where the bandwidth being delivered to the branches did not meet the contracted speeds. The bank's WAN managers provided copies of these details to the service providers, who were able to make the appropriate corrections and deliver the proper bandwidth to the sites.

### Summary

Banking today depends on expediency. Delays and "poor network / application" performance at branches erode customer confidence and can lead them to change their banking preferences. This bank appreciates the value of a loyal customer and their importance to the bottom line. The problem with slowdowns in these newly upgraded locations was quickly isolated with nGeniusPULSE to lack of bandwidth, considerably lower than the contracted amount. Reducing impact to their customers, improving employee and IT productivity, and protecting the investments they made in bandwidth are all benefits of visibility provided by nGeniusPULSE.



**Corporate Headquarters**  
 NETSCOUT Systems, Inc.  
 Westford, MA 01886-4105  
 Phone: +1 978-614-4000  
 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)

NETSCOUT offers sales, support, and services in over 32 countries. Global addresses, and international numbers are listed on the NETSCOUT website at: [www.netscout.com/company/contact-us](http://www.netscout.com/company/contact-us)