

It's NOT
the Network™



Frontier Airlines

CASE STUDY

FRONTIER

"BUY IT NOW! WITH NETSENSORY MY STAFF IS FAR MORE PRODUCTIVE AND SPENDS FAR LESS TIME FIRE-FIGHTING, SO THEY HAVE MORE TIME FOR THE PROJECTS THAT ADVANCE OUR CORPORATE OBJECTIVES. WE'VE GOT A BETTER HANDLE ON OUR SLOS, CAN BETTER DEMONSTRATE OUR CONTRIBUTION TO THE BUSINESS, AND JUST GENERALLY HAVE BETTER CONTROL OVER THE NETWORK."

GERI CAROLAN, DIRECTOR OF IT INFRASTRUCTURE, FRONTIER AIRLINES

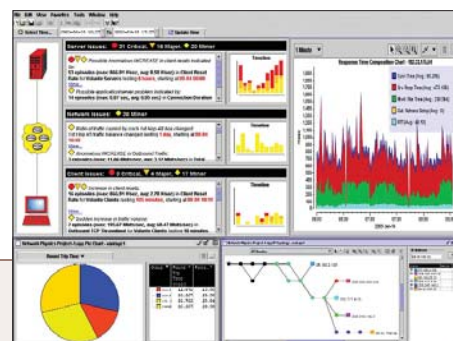
"A Whole Different Animal"

Frontier Airlines is a low fare airline that provides service from its Denver hub to 47 destinations in 29 states, spanning the nation from coast to coast and to seven cities in Mexico and one in Canada. As the second largest jet carrier of Denver International Airport (DIA), Frontier's fleet of Airbus jets averages 250 daily system-wide departures and arrivals, serving 24 out of the top 25 destinations out of Denver. The company employs about 4,800 people in cities throughout North America.

Moving Bits to Move Airplanes

Frontier's MPLS WAN is a critical resource for the airline. It connects the company's data center in Denver to offices and airports throughout North America. It supports both important customer-facing applications, such as seat assignment, electronic ticketing, curbside and online check-in, as well as all the logistical and management applications necessary for running a major airline.

But even as the network was rapidly expanding to support Frontier's business objectives, performance was slowly degrading, and the company's traditional SNMP device-based management system couldn't give the IT staff the visibility they needed to meet their Service Level Objectives (SLOs).



Frontier Problems

- > Inability to effectively manage SLOs on nationwide MPLS network
- > Difficulty troubleshooting and determining the source of application performance problems
- > Unable to effectively monitor and evaluate network latency and application performance nationwide

NetSensory Solution

- > An NP-2000 NetSensory Enterprise appliance installed at the Denver data center
- > Extensive real-time and historical reporting of over 60 critical metrics
- > Easy drill down to problem cause
- > Reports network and application performance metrics in terms of business impact

Frontier Benefits

- > Better communication with CFO and business managers
- > A faster and more efficient network team
- > Better management of WAN vendor
- > Improved ability to meet Service Level Objectives

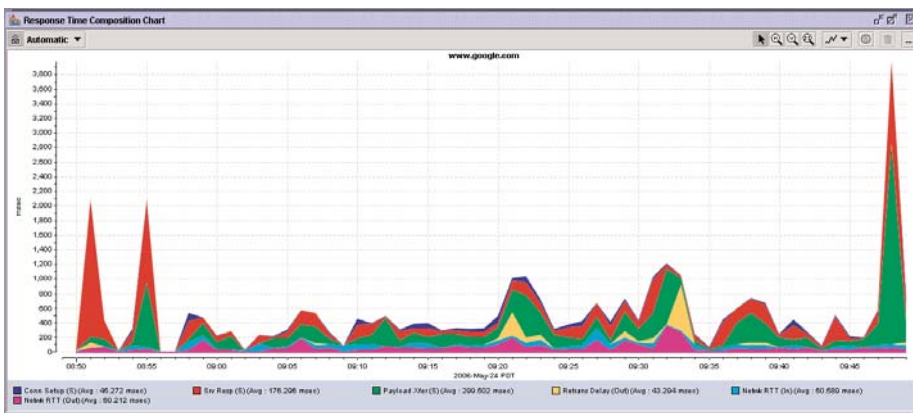
"It was like looking at our network through a straw," says Geri Carolan, Director of IT Infrastructure for the airline. "Our jets may fly at 30,000 feet, but our network management system could barely lift us above the runway in terms of delivering a network-wide overview of performance and utilization."

Managing SLOs Across the Network

After a thorough audit of the airline's network and objectives, Frontier installed an NP-2000 NetSensory Enterprise appliance at their data center in Denver.

"In essence, the ROI on the NetSensory appliance was immediate," says Geri. "We gained insight into the source of application performance problems that was basically impossible with the old solution, since the SNMP system couldn't see into the MPLS network and give us traffic details by application and location. We were able to start solving problems right away."

The Network Physics Response Time Composition Chart breaks down end-to-end application response (User Response Time) into its component parts: TCP connection setup time, server response time, payload transfer time, retransmission delay (time lost to packet loss), and latency inbound and outbound, enabling network managers to very quickly distinguish between server, network, and application problems.



"Most of all, NetSensory enabled us to quickly establish a baseline for performance on all critical applications—we knew all we needed to know about network health within a month. This has made it much easier to manager our Service Level Objectives. We can see at a glance where we're not meeting those objectives and address the problems right away, often before there are complaints.

Managing the WAN Vendor

"In addition, we were able to start using NetSensory data right away to better manage the WAN vendor, since we could see real details of problems that had been invisible to us before. This was invaluable in helping us extract the maximum value from our contract with the MPLS provider."

The IT staff was able to correlate slight changes in load on the MPLS network with significant increases in latency and packet loss. The appliance's extensive reporting capabilities not only helped the WAN vendor resolve the problems, but also served to help Frontier assess the success of the vendor's efforts.

Managing Upwards

The reports furnished by the NetSensory appliance also helped Geri convince the CFO and other non-technical managers of the need for a network upgrade.

"What NetSensory quickly showed us was that the network as then provisioned wasn't capable of meeting our SLOs in the long run. And with the reports I was able to create, I could show the CFO and line-of-business managers exactly why, and why we had to spend the money I was asking for to fix the problem."

She explains that the ability of NetSensory to present performance and utilization metrics in terms of their impact on the business and critical resources was what really clinched the deal. "The CFO and other managers were very impressed with the clarity of my presentation, thanks to NetSensory reports."

Troubleshooting Day-to-Day

Even as Frontier goes forward with its network upgrade, relying on NetSensory to gauge the success of their efforts, the appliance plays a central role in day-to-day troubleshooting as well.

"Early on, NetSensory alerted us to virus-like activity at one airport that was impacting the entire network. We were able to quickly pinpoint the cause and put an end to it, something that would have been nearly impossible with the old management system."

Asked what she would say to a peer considering the NetSensory solution, she replies, "Buy it now! With NetSensory my staff is far more productive and spends far less time fire-fighting, so they have more time for the projects that advance our corporate objectives. We've got a better handle on our SLOs, can better demonstrate our contribution to the business, and just generally have better control over the network."



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