

SolarWinds on track as Ansaldo STS builds Rome Metro

When tourists and citizens are avoiding congestion by travelling swiftly and safely on Rome Metro's new automated Line C, they will owe just a little to SolarWinds network management. Two of these, Network Performance Monitor (NPM) and Engineer's Toolset, are helping **Ansaldo STS**, an industry leader in signalling and rail transportation solutions, to create an ultra-reliable network that will run the city's 30 driverless trains.

The Customer

Ansaldo STS provides traffic management, planning, train control and signalling systems and services globally for railway and mass transit transportation systems. Group companies provide traffic management, train control, signalling systems and maintenance services, all aimed at achieving lasting efficiency and safety for clients and end users. Based in Genoa, Italy, Ansaldo STS employs over 4,100 people in 28 countries.

Rome's fully automated Line C, due for completion in 2016, will fill a huge gap in the city's metro system that is not covered by the existing A and B lines. Construction is being hampered by antiquities that are omnipresent in the historic centre of Rome. The new route will be 25.5 km (15.8 miles) long and have 30 stations. Some 17.6 km (10.9 miles) will be underground. When completed, the line will be served by 30 AnsaldoBreda Driverless Metro trains.

IT Management Challenge

Creating a computer system that automates the 24/7 operations of a €75 million railway system represents a huge and complex challenge. For the first section, Ansaldo has set up signal equipment rooms (SER) at eight stations, each with a redundant backbone gigabit switch residing on a fibre backbone, and each with its own sub-network. Eventually there will be 14 locations, forming a redundant fibre ring and linked by 14 switches. A completely separate 'B' network, running on a separate fibre network, is being set up to guarantee fail-safe operations. The first section of the Line C project is due for completion by December 2012. The entire rail system will be controlled by Ansaldo STS Mass Transit Dispatch Solution platform.

When the project began, a key objective was to monitor track-switching and control mechanisms, and to ensure that Rome Metro's operators have a comprehensive view and total control of traffic operations. Possessing redundant networks that are efficient and reliable was central to these aims, so Ansaldo engineers needed to ensure they had complete visibility into the networks, could spot any developing problems early and fix them easily.

The Solution

James Fraasch, Senior Telecommunications Engineer with Ansaldo, had already used SolarWinds solutions for more than a decade, helping with projects that included work with the Port Authority Trans-Hudson Corporation which serves New York City, and SunRail in Florida. Now he is working on the Rome Metro project with 14 engineers from Ansaldo STS USA's Telecommunications Team.

He recalls, "Years ago, I had lots of problems with T1 circuits going up and down. Installing **SolarWinds Network Performance Monitor** allowed me to locate the sources of these issues and fix them easily. Now I always use SolarWinds NPM and **Engineer's Toolset**, which handle troubleshooting, testing and background work. Today we quote NPM to customers for monitoring all our projects."

CLIENT STATISTICS

- 40 workstations
- 150 switches
- 2,500 active interfaces (switch ports and NICs)
- Ansaldo's Hermes platform for train control

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SolarWinds NPM is a powerful network fault and availability management solution that simplifies detection, diagnosis and resolution of network issues before outages occur. The solution tracks response time, availability and uptime of routers, switches and other SNMP-enabled devices, and shows performance statistics in real time via dynamic, drillable network maps. NPM includes out-of-the-box dashboards, alerts, reports and expert guidance on what to monitor and how to do so. It automatically discovers SNMP-enabled network devices and typically deploys in less than an hour.

Results

At present, NPM is installed and working on the first section of Line C, allowing Ansaldo to monitor situations actively while running test trains leading up to the go-live date. When additional stations are added, the telecommunications team will need to add monitored nodes at each new point.

Getting the project started and setting up NPM took a few days because of the setup complexity and the number of devices being monitored. Setting up maps for all locations took another few days. But it took only a week to finish configuring the server with the operating system, the software, and NPM with mapping.

Fraasch said, "Initially we had reports of random pockets of outages on the line and could never figure out what the problem was. NPM immediately caught a number of field switches rebooting at strange intervals, so we called the vendor and soon had a stable and reliable network. Without a tool like NPM, it would have been much more difficult and time-consuming to source the problem."

He said that being able to customise the Top 10 based on traffic loads, response times, and interface errors allows his team to troubleshoot network problems to see which devices are working. The ability to see if any devices have issues or hot spots allows Ansaldo's engineers to discover and solve problems quickly.

According to Fraasch, his team greatly appreciates the NPM Events Summary page. In the past they had to go through all the logs for each device to understand what was happening, but with NPM they can see everything at once in real-time.

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He has only positive things to say about SolarWinds' Technical Support.

"Every install presents its own challenges and SolarWinds' Technical Support has been extremely responsive to each case. I have had multiple cases opened simultaneously and typically these have been closed within 24 hours thanks to very knowledgeable and responsive support staff. Only the most detailed problems, relating to vendor-specific issues, take more than a few days to have figured out. Every time I have done an install, their support has been great."



Network Performance Monitor (NPM) makes it easy to quickly detect, diagnose and resolve performance issues and delivers real-time views and dashboards that enable users to track network performance at a glance.

IT Management Inspired by You.

SolarWinds (NYSE: SWI) provides powerful and affordable IT management software to customers worldwide from Fortune 500 enterprises to small businesses. In all of our market areas, our approach is consistent. We focus exclusively on IT Pros and strive to eliminate the complexity that they have been forced to accept from traditional enterprise software vendors. SolarWinds delivers on this commitment with *unexpected simplicity* through products that are easy to find, buy, use and maintain while providing the power to address any IT management problem on any scale. Our solutions are rooted in our deep connection to our user base, which interacts in our online community, thwack, to solve problems, share technology and best practices, and directly participate in our product development process. Learn more today at <http://www.solarwinds.co.uk>.

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