

OIL & GAS MAJOR BOOSTS EFFICIENCY WITH NETWORK MONITORING TOOLS

Background

It was early 2009 when SolarWinds took to the Thwack Community to launch its certified professional beta exam.

The exam was to be opened to a “small beta audience” - and one of those accepted was Brad Peczka.

“The offer came to me from SolarWinds to be one of the first people worldwide to do it,” Peczka said.

“I think I was the first person in Australia to complete the certification and I was one of the first 500 people to get it worldwide.

“I haven’t been able to find anyone else in Australia who got certified before me.”

Peczka is – as he was back then – the infrastructure team lead for an oil & gas major with significant operations in North-West Western Australia.

He’s been with the same company – a long-term SolarWinds user – since 2008, although his exposure to the tools goes back further than that.

“I previously worked for a couple of systems integrators,” Peczka said. “We used SolarWinds in various capacities there as well as the Kiwi Syslog Server tools, which SolarWinds later acquired.”

The Challenges

Peczka oversees a geographically dispersed network environment connecting the major’s Perth head office with onshore gas plants and logistics hubs, offshore unmanned platforms, and floating production storage and offloading (FPSO) vessels.

The relative remoteness of operations dictates connectivity.

“We take what we can get,” Peczka said. “If you can think of a connection technology, it’s in use in our environment.”

The mix includes everything from frame relay links for remote telemetry stations to satellite for the FPSO vessels, and high-speed fibre, Ethernet and SHDSL for other facilities.

“We tend to choose the best connection that’s available in an area, and if we can’t get a solid connectivity service delivered directly to the facility we’ll try and reticulate it out there somehow, which we’ve done a number of times using private microwave links,” he said.

The overarching engineering challenge is to ensure users receive consistent performance, regardless of where they are.



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“At some sites, for example, we’ve got 60 people on the end of a 2Mbps VSAT link,” Peczka said.

“Congestion’s a problem, getting data in and out’s a problem, and latency’s a problem, so we have to do extensive engineering around quality of service, caching appliances, and deciding what we host onsite as opposed to what we deliver out of our centralised services pool.

“Then you go the other way and you’ve got 30 people hanging off an 8Mbps fibre link or a 14Mbps microwave link.”

The company’s general infrastructure strategy is to host only critical services at remote sites – enough to guarantee baseline network service.

“We centralise everything else out of Perth,” Peczka said.

“Delivering applications over the network means the network link is critical. We can’t take large variances in latency and we can’t take big outages.”

It is not just business traffic that traverses the company’s links. With facilities and staff working in remote parts of Australia, “generally we’re the only game in town as far as connectivity goes.

“We endeavour to try and strike a happy balance between business-related traffic and what we call social-related traffic,” Peczka said.

“We provide a ‘social network’ at each facility where staff can connect their iPads and laptops, and get access to the internet.

“But it all goes out over shared backhaul, which means you’ve got to hit that fine balancing point.”

The Solution

The company uses a number of SolarWinds modules in its network monitoring environment.

“We use the Network Configuration Manager (NCM) to make changes to our network devices, backup configurations and so on,” Peczka said.

“We use the Network Traffic Analyzer (NTA) to get a feel for what’s travelling over our network, to analyse how traffic is flowing, how links are performing, where our bottlenecks are and what’s causing them.

“And we use the Network Performance Monitor (NPM), which sits on top of both of those products and provides the orchestration layer for want of a better term, as well as general monitoring and up/down alerting.”

NTA, in particular, continued to prove valuable in tracing sources of congestion and detecting security threats.

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“We can work out whether it’s malicious traffic or just something that’s been misconfigured.”

Peczka said that SolarWinds remains a “critical tool” for network monitoring and analysis in the company’s environment.

“We’re always looking for deeper visibility and information on what traffic is traversing our network and our links, and ways to make it better,” Peczka said.

“The SolarWinds product suite we have at the moment and some of the other products they offer help us to do that.”

ABOUT SOLARWINDS

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