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Peter Donnelly
Kingspan
Systems Engineer

Challenges

There is never a dull moment for Donnelly’s team of network engineers. Every day brings a litany of tasks and items to address, some planned and others not.

Currently, Kingspan is in the midst of a large data center consolidation effort that will shrink the number from 50 to 2 massive sites in Ireland and the United States. These initiatives have reduced operating costs by more than 20 per cent across their five global business units with additional savings expected as the endeavour continues. However, this has also added complexity as issues with highly distributed applications running in these data centers and across the WAN can be difficult to troubleshoot. Is the service provider to blame for the degraded performance, or is it tied to company resources? Quickly locating where the root-cause of the application problem resides in such a setting is the objective.

Solution

For more than ten years, Kingspan has quickly overcome performance challenges by using the Network Instruments® Observer® solution. As Donnelly stated, “Observer has offered the fastest payback of any monitoring solution. Whenever it’s time to fix a failure, Observer has allowed my team to better understand

how packets flow across the network and how that impacts application health. That access has allowed me to quickly resolve problems.”

With the recent streamlining of infrastructure, Donnelly purchased multiple Network Instruments GigaStor™ appliances which added post-event analysis capabilities to Observer. Being able to capture and retain packets and traffic for up to five weeks ensures that no sporadic application abnormalities or security risks are missed. “In the short time we’ve had GigaStor, they’ve rapidly pulled us out of several holes,” stated Donnelly.

Application Misconfiguration

To safeguard the company’s IT infrastructure, a multi-layer protection strategy has been implemented that includes Symantec™ Endpoint Protection. Though satisfied with the core functionality, there were issues of network congestion as the application generated large amounts of traffic.

“Symantec was generating 15 per cent of the traffic traversing the MPLS links at the datacenter,” stated Donnelly. “Once we used GigaStor to prove this, we reconfigured the Symantec End Point Protection to reduce traffic volume while maintaining robust malware protection.”

Application Timing

As a publicly traded company, Kingspan is legally mandated to provide financial reports. Recently, the business analytics application used to generate these reports suddenly refused user login requests. Given the importance, it was critical to resolve the issue quickly. Working cross-functionally, Donnelly’s team was able to narrow the likely cause to one related to a ten minute difference in server system time-stamps.

Using Observer filtering and the retrospective analysis of GigaStor, it was determined the time source of the local domain controller was not Active Directory but rather an external Linux system. Once corrected, the application was able to effectively synchronize and begin operating cross-divisionally. The ability to go-back in time and view actual packets traversing the network was critical to rapidly solving the issue—in this case GigaStor directed Donnelly to the specific packet in five minutes.

Data Center Consolidation

The Kingspan data center reorganisation has involved a complete re-architecting of the IT infrastructure and many of the underlying enterprise-wide services





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creating the potential of large-scale disruptions to the customer and employees' user experience.

The Observer Platform has been central to the success to date. "Every time we initiate a particular site or application consolidation", explains Donnelly "we use the long-term views of traffic provided by GigaStor to establish performance baselines and validate application performance has not been impacted by the change."

Observer has been used to tune the performance of the primary SAP ERP system and other services as well. Donnelly describes the process, "I review timing and delay from the network perspective and pass this on to the developers for improved application performance." Kingspan has found the increased cross-functional collaboration between application, and infrastructure teams makes for a better end user experience.

Into the Future

As Kingspan grows, they will increasingly depend on Donnelly and his team to maintain the network and infrastructure to support whatever technologies are required by the business. Donnelly, as always is optimistic, "I use Observer everyday of the week and it has never failed to let us quickly resolve the issue we are confronting. I don't expect that to change anytime soon."

About Kingspan Group

Kingspan Group PLC is a leading manufacturer of sustainable building solutions for residential and commercial construction. With manufacturing and distribution operations throughout Europe, Asia, and the United States, the company employs over 4,700 people.

With an infrastructure that spans the globe, the network team plays a pivotal role in ensuring customers and employees have an acceptable user experience each time they utilise the company's IT applications or services. To achieve this objective while reducing costs, Systems Engineer Peter Donnelly and his team must manage daily application performance and delivery, including complex ERP systems that span across a highly distributed environment.



"Observer Platform enables collaboration between application, network, and infrastructure teams for optimized end user experience."

Peter Donnelly
Kingspan
Systems Engineer



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