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INTEGRATED IT USES ITRINEGY NE-ONE PROFESSIONAL NETWORK EMULATOR TO DRAMATICALLY REDUCE TESTING TIMES AND SAVE 1,000 HOURS HELPDESK SUPPORT

Integrated IT (IIT) is a leading regional MSP in the Northeastern United States. Based in Waltham, MA, they support and maintain the networks of over 250 business clients and have over 10,000 PC-class devices under management.

Last year IIT decided to update the endpoint protection suite of products they bundle as part of their service. The new product provides enhanced security and protection against modern threats, but is more 'invasive'. There were concerns about the potential impact this new toolset might have on the perceived performance of their clients' systems, especially in situations where individual users might be in locations with poor network connections, particularly within heavily secured networks or on airplanes, as these two scenarios represent common working environments for some of their clients' top producers and executives.

Modern endpoint security tools do much more than just compare against signatures, and often rely on sending hashes of suspect data to 'the mothership' for validation. If those queries are disrupted by a bad network connection, the system can freeze, leaving the user perplexed – and upset.

The new endpoint security toolset is very flexible and provides granular control over its features, but developing policies requires carefully balancing security with performance, and it was clear from the outset that no one policy could fit all the use case scenarios. IIT developed a plan to rigorously test as many of the network conditions their clients would face as possible, to ensure they were providing as much protection as possible while still allowing systems to perform smoothly.

THE PROBLEM

"Some of the scenarios were almost impossible to duplicate reliably in our lab. A user working off a wireless hotspot may have connectivity that ranges from 'good to very poor' – in the context of a single session. Internet access from airplanes is also highly variable, and the patterns of network degradation vary tremendously and on a whim" explains Frank Vincentelli, Chief Technology Officer.



A systematic effort to test these scenarios was launched. Scheduled to execute over three months, it included lab efforts as well as field efforts, including tests at major public hotspots and four legs of coast to coast flights.

THE PROBLEM (CONT./)

Clearly, an alternative approach was needed that would enable IIT to achieve realistic testing across a wide range of network experiences in order to verify the product's ability to cope with the variable quality networks that it would inevitably encounter.

THE SOLUTION

Through a partner company, IIT were made aware of iTrinegy's NE-ONE Professional Network Emulator appliance which enables the user to easily create software defined test networks (SDTNs) in the lab. These SDTNs can quickly mimic different network environments and manipulate network characteristics such as restricted bandwidth availability, delay, jitter and packet loss, erroring and reordering. The applications or systems under test are then introduced into the replicated environment in order to verify that their performance will be satisfactory.

"We decided to incorporate the NE-ONE Professional emulator into our workflow. After a very quick configuration, we created a scenario that duplicated the conditions in an airplane, a public hotspot and a heavily secured network. In each case we used metrics gathered during our initial sessions as the yardstick, adjusting the parameters in the emulator until both the measurements (e.g. ping times, jitter, etc.) matched 'live' environments, and performance 'felt' similar (as



The NE-ONE Professional was instrumental in helping to keep key executives productive and happy on airplanes

good or, more importantly, as bad)", explains Frank.

"Within two hours we had the ability to test changes to policies in real time, and to compare 'good' network performance side by side with that on a 'bad' network. We were able to test each product feature independently and analyze how they impacted performance, and then test them again as a bundle. This allowed us to rapidly hone in on the optimal configurations for each of the expected use case scenarios, and ultimately to deploy the new endpoint protection tools to our clients with minimal impact and disruption."

CONCLUSION

When asked what the major benefit the NE-ONE Professional had brought to IIT, Frank replied, "Thanks to the NE-ONE Professional, we achieved more in one week than in the previous three months of testing, and saved an estimated 1,000 hours of helpdesk support, not to mention an unquantifiable amount of good will."

"Going forward, we can envisage using the NE-ONE Professional on future projects in order to verify the performance of other products we provide to our customers".