WHAT'S INSIDE

NE-ONE ASSURES VITEC CUSTOMERS OF IP ENCODER/ DECODER PERFORMANCE OVER NETWORKS

VITEC is a leading worldwide end-to-end video streaming solutions provider for broadcast, military and government, enterprise, sports and entertainment venues, and houses of worship. Combining broadcasting with live streaming capabilities, VITEC's H.265 (HEVC) and H.264 offering is the most extensive in the market with encoding and decoding appliances, IPTV solutions for desktops and mobile devices, and PCI cards with SDK for integration projects.

Wishing to ensure their solutions continued to meet and ideally exceed customers' expectations, VITEC looked to deploy network emulation technology to enhance their QA and testing procedures by enabling them to create a virtual test network in which to verify the resilience of their products to lossy IP transmission links.

THE REQUIREMENT

VITEC develops high end video IP encoder/decoders, they test and validate their video compression algorithms heavily to deliver the best solution on the market. It is paramount for VITEC to test and tune their solution not only on perfect IP networks but also on lossy transmission links such as the Internet or Satellite.

VITEC had a number of improvements it was looking to implement through the selection of an appropriate network emulator. These included:

- The ability to clearly test transport protection technology and error correction algorithms for video, audio and metadata transmission
- The capability to test and validate VITEC products that integrate these transport protocols and algorithms
- The ability to reproduce their clients' use cases: simulating their own network conditions (The Internet, Satellite, RF,…) in order to enhance incident management and accelerate resolution times

The chosen solution would need to be able to reproduce a range of network characteristics including Packet Loss, Network Jitter (Packet Delay Variation), Packet Corruption, Packet Duplication and Packet Reordering.

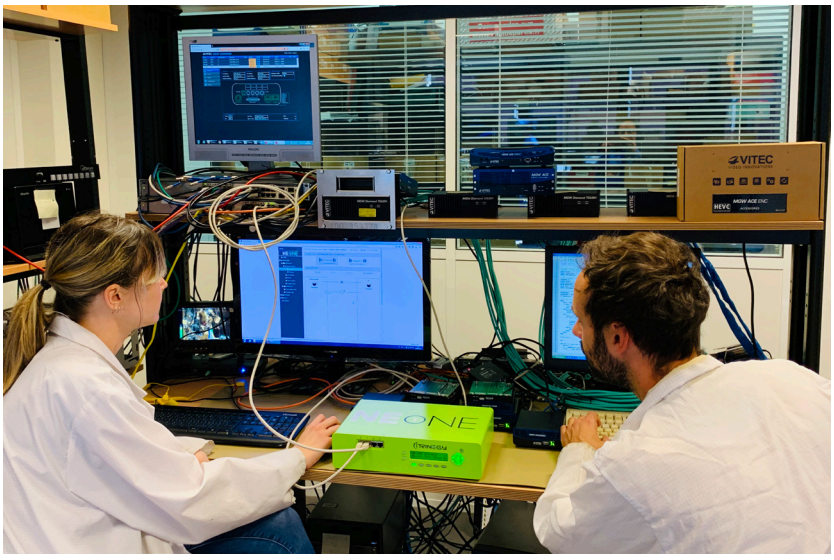
The two main criteria VITEC had in mind when looking for a solution were versatility and ease of use. Having previously used free software that offered some of the required capability, VITEC were also well aware of the limitations of such products, and therefore determined that they needed a commercial product that was supported, robust and reliable.

THE SOLUTION

EASE OF USE

VITEC conducted a review of commercial network emulator products and only iTrinegy's NE-ONE Model 20 met all of the company's needs. Thierry Trocme, Technical Support Engineer explains, "We wanted something easy to use with limited settings to configure the required test network and when in the 'basic mode' the NE-ONE was a perfect answer to this requirement. With a minimum of network and script knowledge, the NE-ONE is quite simple to use. In addition, the iTrinegy team was very attentive to our needs and provided us with the best possible support during the product testing phase."

The basic mode Thierry refers to is the set of pre-defined network types (such as Mobile, Satellite, WAN) that are supplied as standard with the NE-ONE and which can be selected via drop-down menu, making it quick and easy to create the desired network environment.



NE-ONE Network Emulator helps VITEC verify Encoder/Decoder performance over lossy IP networks

BUT WITH ADVANCED FEATURES TOO, INCLUDING SCRIPTING

However, Thierry also commented that, "We also wanted, for some test validations, to be capable to go deeper in the protocol and the NE-ONE's 'advanced mode' is great for that. You can introduce a very wide range of different network defects and they can be precisely adjusted. Another thing we liked about the NE-ONE Model 20 was the fact that we can control the system via scripts, which is a real time saving for us during our tests."

This scripting ability comes as standard with the NE-ONE Model 20 and is achieved using its Command Line Interface (CLI) /API which integrates and automates testing over real-world network conditions with existing functional and performance test tools or test scripts. This significantly enhances testing processes to identify network deployment risk with minimal impact on test time and resources.

FLEXIBILITY

The twenty concurrent network links supplied with the Model 20, together with its different modes offers the necessary flexibility VITEC needs to meet its testing needs. In addition to the ability to quickly reproduce customer network environments in order to resolve their problems and also verify the performance of VITEC's algorithms, the company uses the NE-ONE to perform automatic regression testing via the scripting capability. Although not a feature used extensively by VITEC, the NE-ONE Model 20 also comes equipped with the Network Scenario Builder which enables the user to combine together a series of different network conditions to simulate changes in network quality and availability over time, helping to enhance the realism of the testing process.

CONCLUSION

When asked what value the NE-ONE has delivered for, VITEC commented "The solution helps us deliver optimized IP encoding and decoding solutions to the market. Ultimately, it assures our customers that VITEC products are very effective in lossy IP networks, giving them the confidence to deploy VITEC technology into their streaming environments".

The iTrinegy NE-ONE Network Emulator referenced in this case study is available on a variety of different platforms

www.itrinegy.com · T: (USA): +1 888 448 4366 · T: (UK): +44 (0)1799 252 200 · E: info@itrinegy.com