SME IN THE SPOTLIGHT

Fast, efficient, secure

The intelligent way to transfer data

Clevernet is a Barcelona-based company with an office in Silicon Valley, California, whose explicit mission is to make the internet better by providing a faster, more reliable and secure way to transfer data. How did this mission, and indeed the company, come about? It's a fascinating story. Clevernet's Oscar Chabrera explains.

Get what you pay for

"It all began in 2014 when our co-founder, Mario Nemirovsky, was working in Barcelona and was trying to transfer a large file to California. He noticed the file was taking an unusually long time to send. Even when he increased his bandwidth to 600MB per second, the file was still only being transferred at 1/10th the bandwidth his company was paying for! So, Mario started to analyse what was happening together with co-founder René Serral. They found that the TCP protocol was the bottleneck and would allow a maximum transfer speed of between 40 to 60MB per second. It really seemed like paying for 600MB was a waste! Right there and then, the company was started as Mario vowed to solve this issue and create a platform to make the internet better."

Basically, the Clevernet software solution improves the performance and security of public and private WAN connections by leveraging Simultaneous Multi-Path connections. Clevernet revolutionises how organisations use the WAN, driving measurable outcomes and improving the end-user experience. "In essence," Oscar says, "it's about helping our customers get the most out of their paid network connections and, at the same time, creating a more efficient and secure environment for data transfer."

Many roads lead to Rome

Oscar uses an analogy to illustrate the unique Clevernet approach. "We are the only company in the world that understands the whole network topology. We are like an enhancement of Google Maps for the network – using time and distance as our main criteria, our AI technology finds a range of options to enable traffic to get from point A to point B. The software analyses all the potential paths to go from one place to another and then selects the best options. Before sending a transfer, Clevernet splits the flow of information along the different paths and sends them out at the same time. Think of this as a tour group that arrives at an airport and instead of being transported by bus, each person is sent on their own motorcycle along different routes, thus arriving at the hotel more efficiently. It makes for a much faster and more secure transfer of data."

Clevernet leverages all of a customer's paid internet connections/ISPs to significantly reduce downtime, protect data in motion, and more effectively use all of its paid available bandwidth. The customer can add up the total

bandwidth and use all of it — when a file is transferred, flows are sent simultaneously via the paths from all the connections/ISPs, significantly increasing the file transfer speed. This "Simultaneous Multi-Path" steers traffic through the optimal tunnels, ensuring that the best available connections are being utilised all the time. "What's more," Oscar adds, "this means that if you have two or more connections /ISPs, and one of them goes down, your end-users' connections are automatically steered to an available one so end users never experience downtime."

Adapting to a new world

And in the current COVID-19 climate, such solutions have become more essential than ever. "We see that people have to work from home and fortunately our solution allows them to be very productive while putting data in motion safely first. Clevernet has two different software solutions, the first one, *Clevernet Boost*, is implemented site-to-site, site-to-cloud or cloud-to-cloud. An example of the former is a clinic with doctors located across multiple geographical sites that needs to ensure online patient profiles are backed-up daily to various private data centres. Normally, this process can take several hours, but installing Clevernet saves time, where time is essential. The software can help save patients in critical conditions while ensuring confidential patient data-in-motion is secure. Meanwhile, our site-to-cloud solution enables companies to maintain part of their service infrastructure in the cloud, thereby making businesses more dynamic."

When the Clevernet team saw what was happening last February in Italy, the company decided to accelerate its second solution, *Clevernet Remote*, based on the same patented WAN optimisation technology as Clevernet Boost. "We realised that employees working from home tend to have less bandwidth capability and corporate VPN connections are often ineffective since they significantly slow down the internet. *Clevernet Remote* is several times faster, more secure and reliable than any traditional corporate VPN. Additionally, COVID-19 changed our approach to R&D since we realised we needed to be more versatile and adaptable to changing circumstances. The whole world has had to adapt."

Circular Economy and Sustainability

ICT and the Internet sector are one of the largest global carbon emitter industries. By leveraging the use of existing internet lines to their maximum bandwidth capacity, Clevernet minimises the need to install new infrastructure.

ITEA3-CDTI POLDER paying off

The past year has been a time for innovation and research, in which publicly funded research programmes were central to Clevernet's development as a company. "Central in two ways," Oscar suggests. "First, we received funding from the Public Authorities. In Spain this is based on the results produced. Second, and more importantly, participating in European projects gave us an opportunity to connect with our future customers who validate that our research is heading in the right direction." Clevernet participates in various Spanish and European projects as well as the ITEA3 POLDER project that has yet another year and a half to run. The POLDER project aims to design, develop and deploy a software tool-suite to support government, city councils and related organisations in the elicitation, design, application and validation of policymaking. With recent advances in technology, from wireless sensor networks to big data processing and analysis, urban policymaking can benefit from these emerging technologies with new supporting tools and an optimised process.

"We were invited to contribute our expertise in optimal network deployment," Oscar explains, "and this involvement is certainly paying off. We get the opportunity to interact with our partners and feed off of each other. Everyone has something different to offer and the collaboration has helped us accelerate our development of a network traffic analyser. This analyser looks at network characterisation, app identification, user profiling and network monitoring capabilities in both Service Providers and SME's. Currently, hotel chains in Lloret de Mar (Spain) are helping us validate our analyser results, which will help hotels to better understand their own customers. Not only will society benefit from our technology and products, but so too will the hospitality, healthcare, hybrid cloud and countless other industries."

More information

www.clevernet.io