On the Radar: Clevernet delivers a better WAN experience

Providing a solution to make WAN communications faster and more reliable

Publication Date: 13 Mar 2020 | Product code: INT003-000432

Roy Illsley

Summary

Catalyst

The rise of disaggregated systems, or edge if you prefer, means that data, applications, and users are likely to be not all co-located. This means that users will have some part of any service involving WAN communications. The impact of this use of WAN will demonstrate the inherent weakness of the current TCP internet communication solutions. The weakness of this technology will become evident to users, who will experience poor performance, insecure communications, and unreliable communications. Clevernet has developed a WAN optimization capability that enables secure, reliable, and fast network communications using existing TCP-based public internet.

Key messages

- Clevernet uses simultaneous multi-path transmission techniques to deliver reliable and fast WAN communications.
- Clevernet reduces the impact of man-in-the-middle security concerns by splitting the message up and not sending all the communication through a single point/node.
- Clevernet uses a simple and easy-to-understand dashboard.

Omdia view

The challenge in a modern hybrid environment is dealing with the complexities of getting multiple systems to deliver a service that meets business requirements. This challenge is amplified by the need for speed and reliability when content must be delivered over the public internet, or even a dedicated private network. Managing the network delivery aspect of any service is the most difficult, because typically this is outside the control of the IT administrator. However, by using a software tool to provide visibility and control over the WAN traffic, it is possible to ensure that critical communications are prioritized and delivered in line with expectation. Currently, the hot topic is SD-WAN and the benefits of having a software-based approach to networking. However, it is important to not lose sight of the problem with the public TCP-based internet and how WAN optimization solutions can deliver an effective answer to improved reliability and speed.

Recommendations for enterprises

Why put Clevernet on your radar?

The challenge for many organizations is ensuring that content delivered over the WAN is not acting as a bottleneck on overall application performance. While organizations typically do not have control over the WAN, or even much insight into the traffic flow, the effect of packet loss and latency can significantly impact performance. Clevernet has developed a WAN optimization solution that enables organizations using the public internet to ensure network traffic is optimized in terms of speed and reliability.

Highlights

Clevernet provides a flexible solution that operates in multiple different scenarios: on-premises to cloud, cloud to cloud, and on-premises site to on-premises site. The core capability that Clevernet delivers is its ability to intelligently route connections to avoid the problems of degraded performance due to single point overload. The approach taken by Clevernet is to use the power of AI to understand the many different routes any communication can take, and to dynamically check these and take action as needed to ensure that performance and security are not compromised. Clevernet is deployed as a single VM, which means it can be used in any environment from on-premises to public cloud.

Background

Founded by Mario Nemirovsky and René Serral in 2014, Clevernet is designed to transform how organizations use the WAN. The story began when Mario tried to transfer a large file from Barcelona to San Francisco. He noticed the file was taking an unusually long time to send. In fact, it was being transferred at only 1/30th the bandwidth his company was paying for.

Current position

Clevernet solves three main issues organizations experience with WAN communications: reliability, security, and performance. The Clevernet solution also solves a fourth problem of complexity of use, an issue organizations only discover when they begin to use a solution.

Reliability

The major problem with traffic connecting over the internet is that connections are made from a source to a destination at the initiation stage. However, this connection is a single path connection that can become prone to degradation, which in turn leads to increased packet loss and increased latency. Clevernet developed its simultaneous multi-path connection technology so that it can dynamically reroute traffic away from poorly performing nodes in any connection.

Security

Man-in-the-middle is a common security concern for most CISOs about communication over multi-hop communication channels. Man-in-the-middle can highjack any node in the communication path and intercept all the traffic. The concern is that even if the message is encrypted, the man-in-the-middle has captured the whole message and can try to decrypt it; if it is not encrypted, then the communication has been compromised. Clevernet has developed a solution that reduces the impact of man-in-the-middle by not transmitting the entire message over the same path. Clevernet splits the message into a number of discrete entities, and these are transmitted over multiple paths simultaneously, with the message be reconstituted upon receipt.

Performance

Clevernet uses the range of different communication channels you have access to. For example, if you have two ISP connections and a mobile connection, Clevernet can add up the bandwidth of all of them and optimize the traffic through each; it is worth noting that simultaneous paths work for a single ISP as well. The clever part of Clevernet is that it can send a single file via single or multiple channels, and do so simultaneously. Omdia considers that in certain scenarios, the ability to send a message using multiple paths for both performance, security, and reliability will be needed.

Availability

Clevernet increases internet access availability when there are multiple internet access links. It uses all connections simultaneously – if a connection and/or ISP goes down, end-users' connections are automatically steered to an available path so as to avoid downtime.

Simplicity

The ability for IT administrators to use any solution is not always top of mind when it comes to selecting a solution. Clevernet has designed its solution to be simple and intuitive to use. The dashboard delivers a clear visualization of the WAN connectivity and provides simple and easy-to-use management controls. Omdia considers this an important aspect of any product/solution that must be taken into account in an organization's selection process.

Data sheet

Key facts

Table 1: Data sheet: Clevernet

Product name	Clevernet	**Product classification**	WAN Optimization
Version number	2.24	**Release date**	2020
Industries covered	Any	**Geographies covered**	Any
Relevant company sizes	250+ employees	**Licensing options**	Mixed
URL	www.clevernet.io	**Routes to market**	Mixed
Company headquarters	San Francisco, CA	**Number of employees**	20

Source: Omdia

Appendix

On the Radar

On the Radar is a series of research notes about vendors bringing innovative ideas, products, or business models to their markets. Although On the Radar vendors may not be ready for prime time, they bear watching for their potential impact on markets and could be suitable for certain enterprise and public sector IT organizations.

Further reading

ICT Enterprise Insights 2019/20 – Global: IoT, Cloud, and AI, PT0141-000003 (October 2019)

Author

Roy Illsley, Distinguished Analyst, Infrastructure Solutions

roy.illsley@omdia.com

Omdia Consulting

We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Omdia's consulting team may be able to help you. For more information about Omdia's consulting capabilities, please contact us directly at consulting@omdia.com.

Copyright notice and disclaimer

CONTACT US

omdia.com

askananalyst@omdia.com