

128 Technology Delivers Africa's First Intelligent Next-Gen Tunnel-Free SD-WAN Network

Enables Global Communications Carrier to Improve Service Quality and SLA Performance across Africa and the Globe

South Africa-based CMC Networks, an established provider of data communications for global clients, wanted to achieve higher network reliability to better meet its SLA commitments.

For over 27 years, the company has provided cost-effective, scalable, and resilient data communications services to customers around the world, leveraging more than 100 global points of presence integrated into wholesale carrier partner networks. In Africa, the company's footprint spans fifty countries, making it the largest pan-African network. The story of how CMC Networks came to deploy the first intelligent next-generation WAN network of its kind in Africa was driven by a dedication to innovative, out-of-the-box solutions that deliver greater reliability, better performance, and tighter security to customers.

A Continent-Wide Network Performance Challenge

The high cost of MPLS circuits and poor connectivity have long hampered businesses from reaching their full potential in Africa. As concerns about network reliability grew for both carriers and enterprise customers, so did worries that poor user experiences and chronic dissatisfaction could damage provider reputations and adversely affect brand perceptions. If reliability issues for carrier-grade network providers went unresolved, it might even threaten their carrier-of-choice status.

In order to better meet strict SLA requirements, CMC Networks set out to improve network connectivity, performance, and reliability across its pan-African footprint.



The Challenge

Network reliability issues and outages were affecting the customer experience. Network performance and cost effectiveness were targeted for improvement.

The Solution

Software-based Session Smart™ distributed routing system from 128 Technology changed the way the network worked by teaching routers the language of applications and services and eliminating tunnel proliferation.

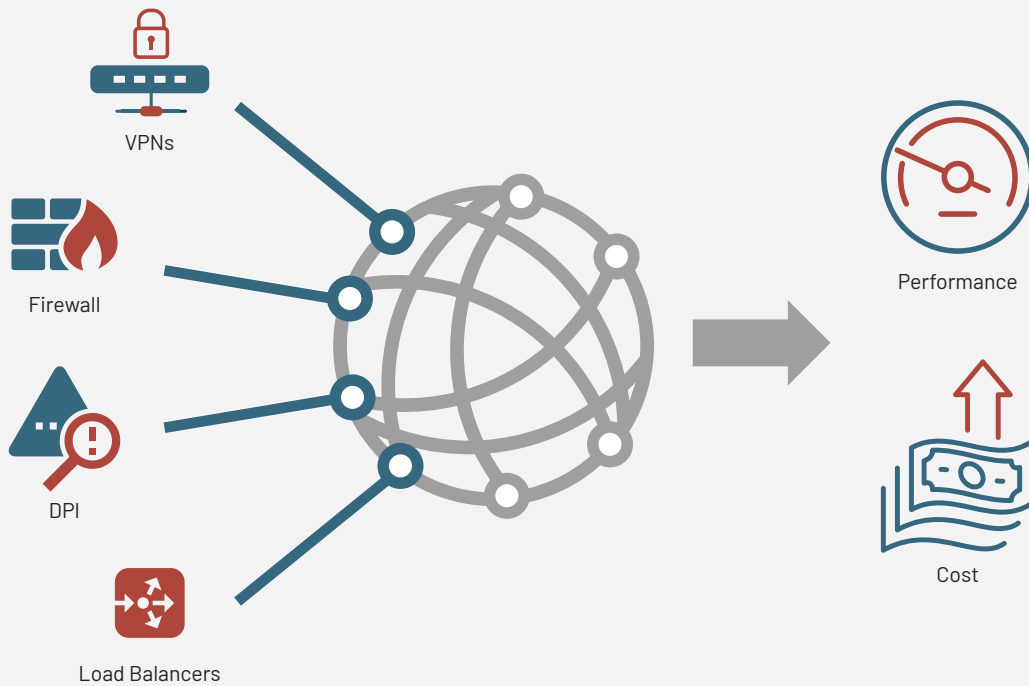
Key Benefits

- Improved throughput from reduced tunneling overhead.
- Zero downtime after tunnel failures.
- Better utilization of low-cost links.
- A simpler, more agile and secure service-centric network that increases performance and lowers cost.

Reliability improvements could be achieved by tackling the link outages and network access problems caused by a proliferation of tunneling protocols and overlays that consume excessive bandwidth. The original routing infrastructure incorporated a large number of tunnels, and traditional SD-WAN solutions only added new tunnels on top of the existing ones. Multiplying IPsec and VxLAN overlay/tunnels created high rates of packet fragmentation and considerably reduced transmission throughput. Poor

quality links proliferated, incidences of dropped packets skyrocketed, and overly long tunnel switchover times after failures caused applications to time-out. All of these issues degraded reliability for end customers. CMC Networks knew it would take an innovation in SD-WAN networking technology to meet the challenge.

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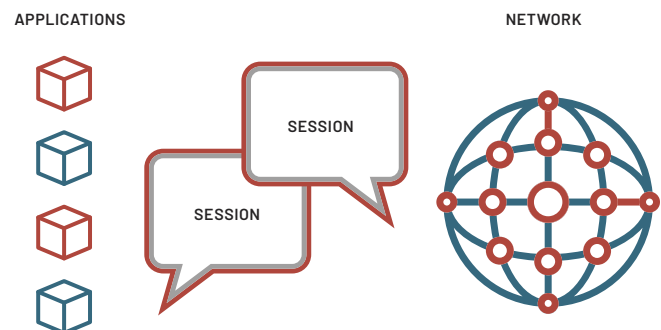


The proliferation of IPsec and VxLAN overlays and tunnels increases fragmentation and overhead bandwidth consumption, affecting performance and reliability

Finding an Innovative SD-WAN Solution

CMC Networks engaged with Redvine Networks and began an extensive solution evaluation and vendor search. After conducting multiple trials with traditional vendors, the company found an extraordinary tunnel-free SD-WAN solution from 128 Technology that was a perfect fit for the needs of the African market.

Built on a software-based, distributed routing system, the 128T Networking Platform and Secure Vector Routing could improve performance as well as deliver breakthroughs in simplicity, agility, security, and cost savings. Session Smart Routing lets the network speak the language of applications and services, while automatically adapting to the requirements of individual sessions and user segments. This makes applications more resilient and responsive while reducing bandwidth and connectivity costs.



Session Smart™ software-based routers talk the language of applications

For CMC Networks, this disruptive, cutting-edge platform addressed the limitations of its existing network routing infrastructure in several significant ways:

- Tunnel free SD-WAN ensured that there was no overhead being added to every packet. This removed issues with fragmentation, lowered bandwidth usage, reduced tunnel set-up times, and improved application performance.
- A dynamic multi-path routing approach supported MPLS, Internet, LTE and satellite channels without sacrificing reliability.
- The software-based session oriented routing fabric empowered the routers themselves to natively provide robust security, centralized orchestration, load balancing, and other network functions.
- Session Smart's advanced Zero Trust Security approach transformed the IP network into a distributed network firewall that handled adaptive encryption, per-hop authentication, and global access control.

In addition, 128 Technology complemented its uniquely superior SD-WAN solution with a level of customer focus and responsiveness that was cited as a major factor in the selection. After lab testing and a proof-of-concept pilot project validated key improvements, CMC Networks was ready to deploy the first intelligent next-generation SDWAN network of its kind in Africa.

The deployment was aided by 128 Technology partner Redvine Networks, a specialist in designing, building and managing next-generation and SD-WAN-based networks for customers across Africa. Redvine and 128 Technology formed a seasoned team that delivered a quick turnaround on key modifications and enhancements to fit the needs of this specific use scenario.



Delivering High-Powered, Highly Profitable Performance

For CMC, the 128T Networking Platform delivered performance levels and service reliability that its customers demanded through:

- **Better utilization of low-cost links**
- **Elimination of tunneling technologies**
- **Improved throughput**
- **Zero downtime in case of failures**

Deploying tunnel-free SD-WAN has dramatically improved the level of SLA performance that CMC Networks and its customers can provide. Initial studies indicate that the cost of deployment can be recovered in less than six months.

With the shift to next-generation SD-WAN, carrier customers can meet their customers' needs for real-time connectivity and improved services that support data-driven decision making, new business opportunities, and higher efficiencies. End users can focus on business while the network enables their success, rather than hindering it.

CMC Networks believes its new networking platform is driving a breakthrough in user experience and customer satisfaction that will lead to expansion and market share gain in other regions. Building on the transformation

achieved in Africa, CMC Networks has plans to roll out tunnel-free networking solutions to other regions, giving their networks the dynamic, adaptive ability to deliver what the business needs, when and where it needs it.

128 Technology is proud to be the technology partner of choice for this major global telecommunications carrier. To learn more about use cases where tunnel-free SD-WAN frees networks from legacy limitations, visit www.128technology.com.

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ABOUT 128 TECHNOLOGY

At 128 Technology we help our customers radically reinvent their digital futures based on a new model for virtual networking called Session Smart™. Session-smart networking enables enterprise customers and service providers to create a service-centric fabric that's more simple, agile, and secure, delivering better performance at a lower cost. Whether your enterprise is moving your business to the cloud, modernizing the WAN edge, seeking more reliable unified communications or pursuing an industrial internet of things IIoT initiative, session smart networking re-aligns networks with digital transformation initiatives.