CASE STUDY

2022

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Unified Communications as a Service (UCaaS) provider enhances network connectivity with Megaport and Twilio Interconnect.

✕ | TELIN

Telin is a preferred distributor in the United States and Canada of IP-PBX licenses for 3CX phone systems, SIP (Session Initiation Protocol) trunking, 3CX cloud hosting, Snom/VTech hardware, white label billing, and tax services. Backed by a team of experts with an extensive background in security, redundancy, and compliance, Telin helps partners consolidate all the telecom infrastructure components they need to service and support their end-user clients.

⊗ twilio

Today's leading companies trust Twilio's Customer Engagement Platform (CEP) to build direct, personalized relationships with their customers everywhere in the world. Twilio enables companies to use communications and data to add intelligence and security to every step of the customer journey, from sales to marketing to growth, customer service, and many more engagement use cases in a flexible, programmatic way. Across 180 countries, millions of developers and hundreds of thousands of businesses use Twilio to create magical experiences for their customers.

Twilio Interconnect enables enterprises to connect directly to the Twilio network and guarantees the bandwidth. The service's private connections secure customer communications at the network level while ensuring enterprise-grade service quality. Customers can use Twilio Interconnect to link via physical cross connects, encrypted VPN tunnels, or third-party exchanges, such as Megaport.

KEY POINTS

- Enhanced network connectivity to protect against potential carrier outages due to node congestion and/or Distributed Denial of Service (DDoS) attacks

- Sharpened call quality on Twilio products immediately

- Increased customer satisfaction thanks to bolstered, enterprise-grade network performance
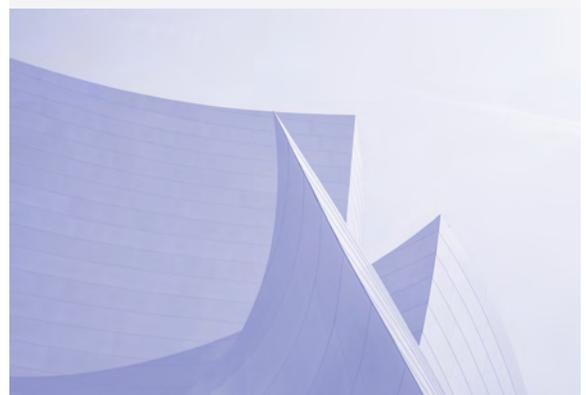
SNAPSHOT

As a trusted distributor of white-label hosted UCaaS solutions to Value Added Resellers, Managed Services Providers, and 3CX phone system providers, Telin needs a highly reliable, performant network. Twilio's leading Customer Engagement Platform is a key part of Telin's resell offering, which gives developers powerful APIs to integrate voice, SMS, text, and email into customer service.

Telin uses Twilio Interconnect and Megaport to provide an enterprise-grade quality of service to their partners and protect their network from potential carrier outages.

Founded in 1991 in Calgary, Telin has been in the hosting business for the better part of three decades. The company started by selling Mediplan, an Electronic Medical Records software solution, to general practitioners, cardiology specialists, and healthcare organizations in urban and rural Western Canada. To comply with differing patient data security regulations across provinces, Telin offers cloud-hosted and on-premises installations of their software. By the time the Mediplan business unit was sold in 2017, 95% of the software's customers had used a hosted version, managed by Telin.

After the sale, Telin focused on offering the UCaaS solutions that were once part of Mediplan, which included a full suite of IP-PBX (Internet Protocol - Private Branch Exchange) software, appointment reminder phone calls, and SMS messaging. The company also shifted its distribution model to provide VARs, MSPs, and other partners with a comprehensive, white-labeled unified communications solution.

"We felt that our skill set was best suited to working with partners rather than end-customers," said Spencer Lee, CEO of Telin. "We provide the components necessary for a full unified communications solution – the connectivity, the phone numbers, the hosting of where the PBX lives, the billing solution, and then the add-on services, the licensing, and the hardware. We essentially enable our clientele to go to market with a solution that they can brand themselves, without having the requirement of having a back-end engineering team."

PARTNERING WITH TWILIO

Telin chose Twilio as their primary strategic global partner to offer their communications APIs for voice services due to the seamless experience it provides to Telin's partners.

"Twilio's API capabilities have been a huge feature-add to our business," said Joshua Westfall, CTO of Telin. "We interact with the API extensively, even exclusively. Our partnership allows our customers to utilize our customer portal, branded Telin One.Console. Everything down to porting and phone numbers and SIP-trunk setup are all done via API from our customers' fingertips."

PREPARING FOR INTERNET OUTAGES

After experiencing a few intermittent internet outages, Telin's technology team looked for ways to bolster connectivity and protect their network against other potential Internet Service Provider issues. Issues could include node congestion, a fiber cut at a data center, or a problem with a telephone switch. The Twilio team brought up Twilio Interconnect as a potential solution to strengthen the links and shorten the path between Telin's and Twilio's networks.

SECURING THE NETWORK

While simple maintenance errors can cause ISP outages, DDoS (Distributed Denial of Service) attacks—in the form of node flooding designed by threat actors—can also bring down a network. After a DDoS attack affected a competitive carrier for a week, Telin decided they needed to enhance network security further.

"We just weren't going to become one of those statistics," Westfall said.

Telin began using Twilio Interconnect to ensure enterprise-grade performance, security, and quality for Twilio's products.

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SOLUTION

Telin chose to use Megaport, one of Twilio Interconnect's partner exchanges, for private connectivity from Telin's network into the telephone switches on Twilio's network. Because of Megaport's 780+ enabled locations worldwide, Megaport services were already available where Telin's network infrastructure was located in Ashburn, Virginia.

CLASS 4/SIP

Network Node

Network Node

Network Node

Megaport

Traditional Trunking

Demonstration purposes only.
More nodes typically exist.

TELIN CLOUD
3CX SERVER
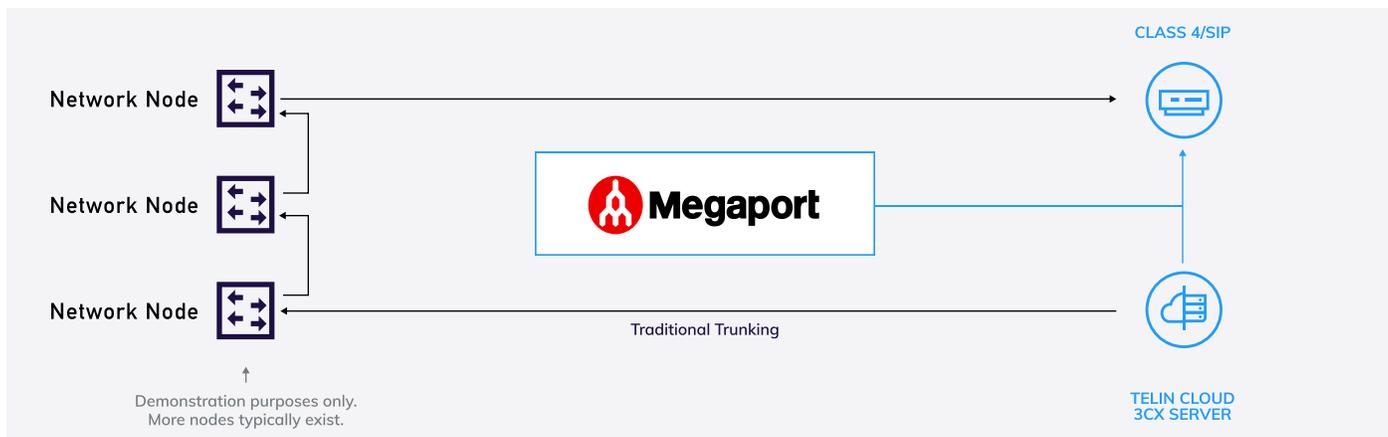
RESULTS

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> *One of the things that Twilio Interconnect and Megaport have definitely cleared up is that any kind of dial delay or ringing response from the switch has been much faster," Westfall said. "You can tell that call connections are quicker. Calls seem to have better quality to them. From the point of hitting 'Dial' and getting a ringtone, it's instantaneous now. There's never a delay, whether there be jitter in a node, or latency, or maybe a node is offline and the call has to route a little further. Those issues have all gone away."*
>
> — JOSHUA WESTFALL, CTO OF TELIN

1 INSTANTANEOUS CALL QUALITY IMPROVEMENT
Westfall said that in tests with the Virtual Cross Connect (VXC) on and off, Telin's call quality improvements were immediately noticeable. "One of the things that Megaport has definitely cleared up is that any kind of dial delay or ringing response from the switch has been much faster," Westfall said. "You can tell that call connections are quicker. Calls have better quality to them. From the point of hitting 'Dial' and getting a ringtone, it's instantaneous now. There's never a delay, whether there be jitter in a node, or latency, or maybe a node is offline and the call has to route a little further. Those issues have all gone away."

2 ENHANCED NETWORK CONNECTIVITY
The solution has worked so well that Telin has made it easy for their customers to build their own resilient networks on-demand, using Megaport within Twilio Interconnect, all managed through Telin's One.Console. When a customer creates a VXC with Megaport, Telin creates a "stacked origination" in Twilio, so that the primary (or highest priority) link uses Megaport's private connectivity, while the secondary link uses the public internet. The customer can also add origination IP addresses for more failover servers, which ensures connectivity continues when network issues occur.

3 NEW OPPORTUNITIES FOR EXPANSION
Telin will expand its usage of Megaport and Twilio Interconnect to its Santa Clara (SV4) Equinix data center in Q4 2022 and Toronto in 2023. "The feedback from customers since migrating to Twilio Interconnect and Megaport has all been extremely positive," Lee added. "We were really focusing on solving for reliability in the event of future issues. So we were doing preventative maintenance by bringing in Megaport. The call quality enhancement was really a nice side benefit."