TelcoBridges

SOLUTION BRIEF

EFFICIENT AND COST-EFFECTIVE TRANSITION TO IP USING DECENTRALIZED GATEWAYS

OVERVIEW

Modernizing the voice network is no longer just about replacing aging switches; it increasingly depends on creating a structure that's simpler and more efficient to operate.

According to the FCC, there are now roughly 18 million switched access lines remaining in service in the US, a sharp decline as providers continue shifting to IP-based networks. Yet many of the transport layers built for TDM, such as muxes, backhaul circuits, and other legacy paths, remain in place even though they no longer add value and are expensive to maintain.

A decentralized deployment model offers a cleaner alternative.

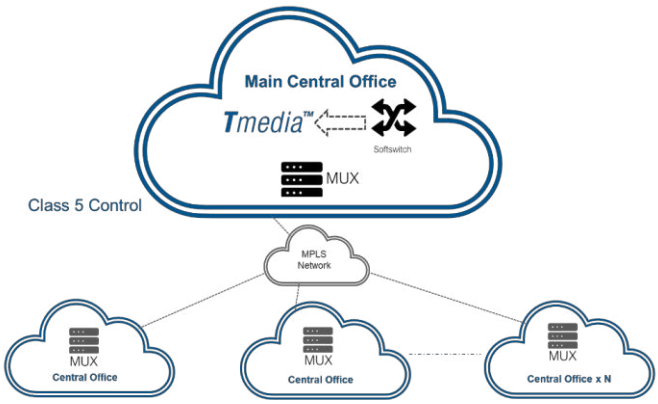
By placing smaller class 4 switch gateway units directly at each central office, operators can streamline routing and introduce SIP where it makes sense without forcing a full cutover of every TDM subscriber. This approach supports modernization goals while giving engineering teams more flexibility in how each site evolves.

CHALLENGES

What makes network upgrades so difficult for many operators? Centralized switching architectures often require large, coordinated migration events that introduce avoidable risk.

TDM backhaul layers (muxes, SONET rings, pseudowire systems, etc.) remain in place even when the traffic mix no longer justifies their cost or complexity. Aging switching and transport equipment adds to the maintenance burden and narrows the options for future growth.

At the same time, engineering teams must support both TDM and IP environments, which slows progress and increases operational overhead. Regulatory reporting, including NECA requirements, also demands clear functional separation that becomes harder to maintain when the network relies on multiple legacy components. Together, these challenges make traditional upgrade paths slow, costly, and more complex to manage than most teams would prefer.



Above: Centralized Architecture — TDM backhauled to a single core.

SOLUTION BRIEF

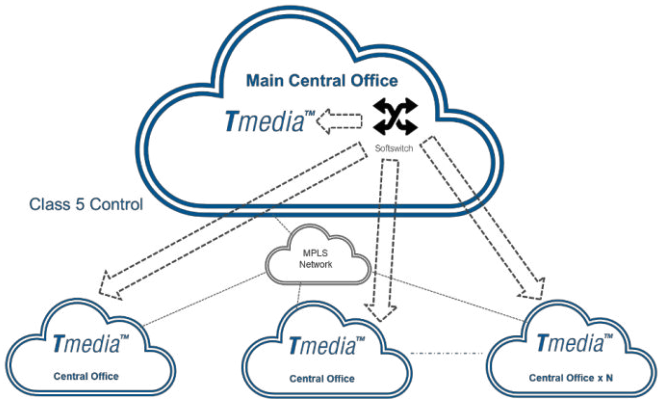
EFFICIENT AND COST-EFFECTIVE TRANSITION TO IP USING DECENTRALIZED GATEWAYS

SOLUTION

Decentralized architecture using TelcoBridges Tmedia gateways gives operators a more flexible way to modernize their networks. Instead of relying on a single large switch replacement, each central office receives a right-sized Class 4 IP-enabled switch that handles local access, signaling, and IP-interworking. This lets teams introduce IP gradually instead of committing to a full system cutover.

The Tmedia gateway terminates GR-303, SS7, or CAS and most TDM signaling locally and converts traffic to IP for delivery to a cloud or virtual softswitch. Because the solution runs over the existing IP network, operators can remove muxes, pseudowire systems, and other legacy TDM transport elements that no longer serve a purpose. High-availability options are also available for sites that require continuous service during maintenance or hardware replacement.

The result is a more cost-effective, end-user transparent deployment model that supports a step-by-step modernization strategy and gives engineering teams more control over how each location evolves.



Above: Decentralized Architecture — Access terminated locally at each site.

CONCLUSION

As operators shift to this model, the first thing they notice is how quickly the cost pressure eases once legacy transport and switching gear come off the books. Day-to-day operations get easier because each site is cleaner, completely user-transparent, and more predictable.

Deployments move faster than expected, and NECA alignment stays steady throughout the process. With (SIP) IP in place, cloud-based call control fits in naturally, and teams retain the flexibility to keep TDM or SS7 where it's still needed.

TelcoBridges Inc.
138 de la Barre, suite 01, Boucherville, QC J4B 2X6 CANADA
Sales +1.450.655.8993 / **TB Support** +1.866.438.4703
info@telcobridges.com TelcoBridges.com