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Internet better.

Future-Proofing a Community:

How Albemarle Upgraded Its Infrastructure Without Disrupting Services.

The City of Albemarle, North Carolina, may be modest in size, but its operational needs rival those of much larger communities. With roughly 17,000 residents and a long list of responsibilities—from utility billing and housing services to parks, waste management, and water treatment—Albemarle needed internet service it could depend on.

That's why the city turned to Kinetic Business to strengthen its infrastructure with high-speed fiber internet and a smart backup plan to match.

Planning ahead instead of playing catch-up.

The City of Albemarle has been a trusted customer for 67 years. Most recently, their IT leadership had been using Kinetic Business fiber for years, and their experience spoke volumes. Fewer than ten outages in six years meant the city rarely had to worry about connectivity. But as demands increased and digital operations became more central to city services, the team began asking a critical question: What happens if the primary connection ever goes down?

Instead of waiting for a problem to occur, the city decided to get proactive. Working with the same trusted provider, they implemented a secondary connection through SD-WAN, using separate fiber-optic paths. So if the primary fiber line goes offline, the backup kicks in automatically, keeping essential systems online without interruption.

With the new solution in place, Albemarle's IT team gained peace of mind and flexibility. "I have full faith in our operations," said Owen Squires, Albemarle's director of information systems. "If, for whatever reason, I need to cut off our fiber path coming into city hall, I know the SD-WAN failover connection will pick up and keep working. Comfort in that resilience is pretty rare."

Modernizing voice through SIP trunking with dynamic IP.

Albemarle's older copper-based voice systems were also becoming difficult and expensive to manage, so the city needed a more flexible and modern solution to route calls and manage communications.

With new SIP trunking services, Albemarle gained the ability to re-route direct inward dial (DID) numbers in real time. If there's ever a network issue, calls can be redirected to mobile phones or other devices without needing to reconfigure systems or disrupt workflows. From the public's perspective, nothing changes—they still dial the same number. Behind the scenes, city staff now have the flexibility to keep services running without interruption.

Gaining visibility with SD-WAN.

Before implementing SD-WAN, identifying network issues meant calling in technicians and waiting days or even weeks for usage reports. Now, the city's IT team can log into the portal and view detailed traffic patterns and bandwidth usage within minutes. This real-time visibility allows them to detect issues early, adjust performance settings, and ensure network efficiency across all city sites.

The SD-WAN platform also enables automatic ticketing and reporting. If something goes down—like during a storm or service event—the system identifies the problem and alerts the team immediately. They get a clear, executive-level overview of the issue and what's being done to resolve it, allowing for faster response and better communication with leadership.

Nhia Ly, network analyst for the city, had this to say about the new setup: "Visibility is no longer a luxury in today's dynamic network environments—it's a necessity. SD-WAN, and our SIP platform, helps by not only improving how we connect, but also by giving us a clear view of what is happening on the network. This visibility helps our IT Department quickly spot problems, keep things secure, and make smarter decisions."

A model for other communities.

Albemarle's leadership sees this as more than just a technical upgrade—it's an example of how smaller cities can take control of their digital future. With the right partners and a proactive mindset, even modest municipalities can run smarter, more resilient networks that support both staff and citizens.

As Owen puts it, "This is all bigger than us. The state of North Carolina wants us to better embrace technology. How do we start talking about failovers being a necessity? I want to set an example and ensure we are helping out other communities as much as possible by enabling the same technology that Kinetic has provided."

Greg Hauser, statewide interoperability coordinator for the emergency management division of the North Carolina DPS agrees, stating, "North Carolina Emergency Management stresses the importance of having a robust voice and data communications redundancy plan. Matching the appropriate concepts and technologies to these plans requires subject matter expertise."

Whether you're managing city services, running a storefront, or overseeing a team, reliable internet and communication tools matter. Kinetic Business delivers high-speed fiber, dynamic voice solutions, and real-time network visibility to help you stay connected no matter what.

Strength and simplicity working together.

What makes Albemarle's technology setup so effective is its balance of reliability and simplicity. Fiber internet from Kinetic Business serves as the foundation, while SD-WAN and SIP trunking add the flexibility, failover support, and voice control the city needs to keep everything connected.

From city hall to water plants, and from legacy phone systems to advanced traffic tracking, this solution just works—without disrupting operations or complicating processes.

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