



Success Story

ResTech Services Deploys Siklu's Terragraph-Compliant MultiHaul™ TG in Madison, Wisconsin

Innovative ISP Now Delivering Wireless Gigabit-Speed Services to MDUs in the Madison Area

Background

ResTech Services offers high-speed Internet to a variety of rental and condo communities in the Madison area. Working exclusively with multi-resident properties allows the company to keep prices low and to pass along those savings to their customers. They also maintain a hybrid fiber-wireless network to deliver a reliable, high-speed broadband experience to businesses, properties, and non-profits – with connection speeds ranging up to 10 Gbps.

ResTech uses multiple wireless bands, such as millimeter wave (mmWave) 80 GHz for long-haul, “backbone” network requirements and 5 GHz for “last mile” connections. The company also makes use of significant “dark fiber” assets in combination with high capacity fixed wireless in order to serve their many MDU properties (150 and counting), some of which have more than 700 residents.

As with so many other service providers in all parts of the world, ResTech was finding that using the 5 GHz band was becoming more and more problematic, especially with regards to the rising “noise floor” there, which would make it impossible to provide 500 Mbps let alone Gigabit-speed connections to MDU customers, since this band is the preferred band for multi-point connectivity, and the go-to band for Wi-Fi in campuses, cellular off-load and -- of course -- inside homes and businesses.

These days, customers expect a Gigabit-speed connection in order to support multiple devices, remote working or learning, and streaming services within their homes – and ResTech wishes to continue serving the growing needs of customers better than the local ILEC and MSO incumbent service providers.



Challenge

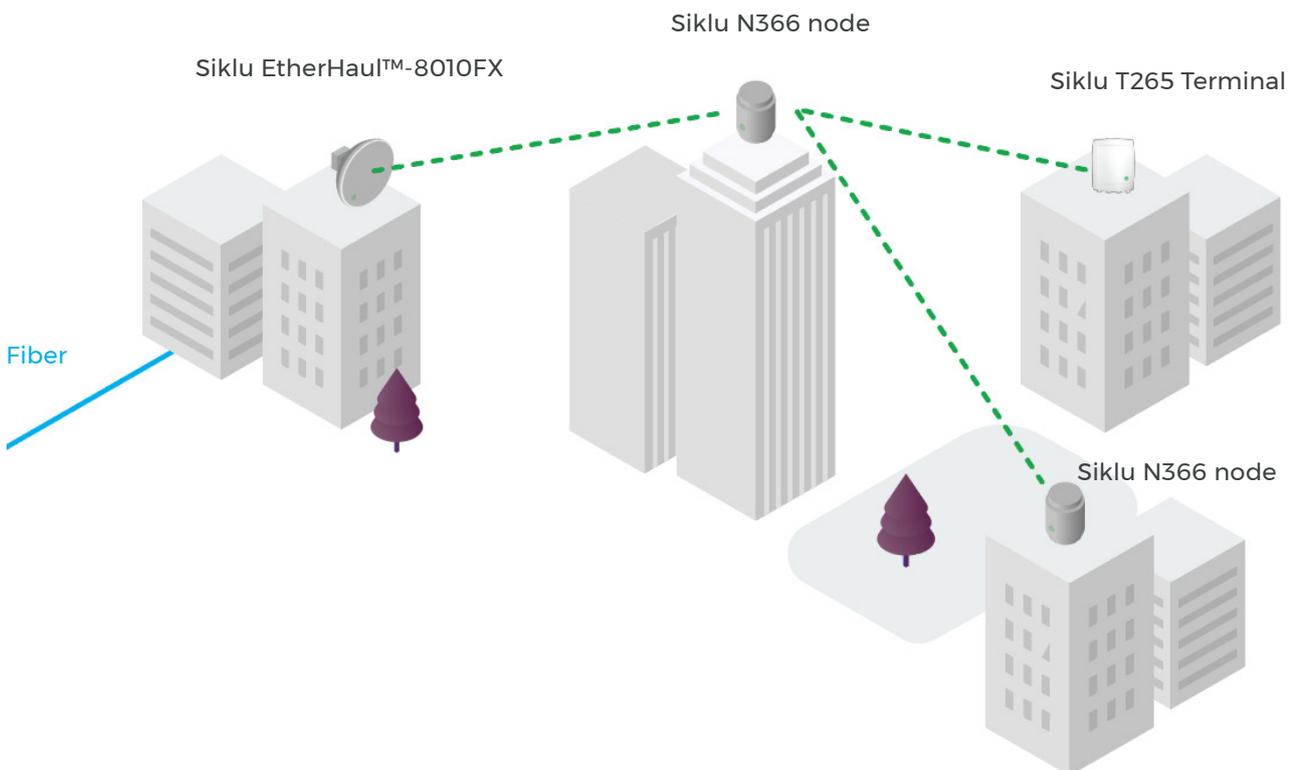
Therefore, ResTech looked to expand their mmWave-based offerings and heard about the increasingly-popular Terragraph- certified solutions, which are multi-Gigabit wireless radios, operating in the 60 GHz “V-band” and designed to meet the growing demand for reliable, high-speed Internet access in urban and suburban environments. Having extensive experience with Siklu products over the years, ResTech reached out to explore options with Siklu's new MultiHaul™ TG product line.

ResTech was looking for the optimal way to use their dark-fiber assets and to migrate customers off the 5 GHz band. Further some of their buildings are connected to fiber and others are not. ResTech was looking for a solution that could fill in a “sweet spot” of sorts in that type of network environment or topology.

Solution

Starting with properties and customers in the Capitol Square and 53703 zip code area, ResTech determined that they could hang MultiHaul TG N366 node radios off of various fiber PoPs and quickly connect their existing properties and be in a position to connect other buildings with expiring exclusive contracts with other service providers.

The average link from an N366 node to a MultiHaul TG T265 terminal unit mounted on a building's rooftop runs approximately 800 feet. Some buildings can be linked together with radio hops such as this and using Multiple Spanning Tree Protocol to complete the network configuration allows ResTech to immediately connect buildings that are passed by fiber – but actually connecting with fiber would have entailed a much higher expense and a much longer installation time.





With a 360-degree field of view, the N366 allows full coverage of a particular area and simple connection of additional T265 terminal units, for a total of up to 60 served locations. It also supports 16 Gbps aggregated capacity with a roadmap to add more, which affords plenty of bandwidth as the number of users grows.

Installation of the T265 terminal units takes advantage of Siklu's beam forming antennas, which eliminate the more time-consuming aiming requirements of directional antennas. Flexible layer 2 bridging between wireless nodes and Ethernet ports simplifies integration with fiber and other wireless backhaul technologies like Siklu's EtherHaul™ E-band radios.

Results

As a result, ResTech now has a much more streamlined, scalable and efficient network operation with simplified RF planning and much more available bandwidth, and headroom for growth with currently unused bandwidth. Such an environment allows equipment such as the MultiHaul TG N366 to reach its full potential.

"Siklu's products easily integrate with our network and their link budget calculator planning tool accurately and reliably predicts performance," said Bryan Schenker, Owner of ResTech Services. "Furthermore, configuring nodes and terminal units can be done within a few minutes by networking staff, and field techs can aim links in seconds. Time is money, and Siklu allows us to efficiently deploy their Terragraph solution, lowering the total cost of deploying their equipment."

ResTech began its Siklu MultiHaul TG project in the 3Q 2021 and already has transitioned more than 600 of its customers to it. ResTech plans to more than double its deployment of MultiHaul TG in the first half of 2022 in order to transition more customers and grow its customer base with new customer acquisitions.

