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Boise Transit Agency Takes New Route to Constant In-Vehicle Connectivity

Valley Regional Transit Improves Customer Service & Operational Efficiency with Constant LTE Connectivity & Centralized Management

Solution: NetCloud Service for Mobile ▪ **Industry:** Public Transit ▪ **Use Case:** In-Vehicle

> "*Prior to our Cradlepoint solution, we had been pushing out firmware upgrades between midnight and 4 a.m. to avoid disrupting our services. Today, we can instantly update our entire fleet with the click of a button.*"
>
> **Nick Moran,**
> ITS Administrator,
> Valley Regional Transit

Summary

Challenge — Valley Regional Transit in Boise, Idaho, knew the consumer-grade modems in its buses were being outpaced by digital transformation. Frequent connection drop-offs had been making it nearly impossible to provide reliable real-time GPS data for critical technologies such as passenger apps and traffic signal priority. Also, the IT team couldn't adequately scale for the future.

Solution — This agency future-proofed its metro bus operations with a comprehensive solution: Cradlepoint's NetCloud Service for Mobile and wireless LTE routers designed specifically for the unique needs of a vehicle — including routing, Wi-Fi, GPS, AVL integration, and centralized network management.

Benefits — With highly reliable LTE connectivity throughout its service area, Valley Regional Transit can depend on the real-time data it gathers and confidently use a variety of technologies to improve efficiency and the passenger experience. The IT team can continue adding new tools for years to come.

Customer Profile

ValleyRide is the transit services division of Valley Regional Transit (VRT), the regional public transportation authority for Ada and Canyon counties in southwest Idaho.

The agency, which spreads 1.3 million trips per year across roughly 60 revenue vehicles, provides fixed-line public transportation services throughout the Boise Metro Area and operates door-to-door paratransit bus services for disabled residents.

Challenges

Before VRT was introduced to Cradlepoint, the 2G/3G modems in the organization's fixed-route buses had become a significant problem. Connectivity was routinely lost.

"The biggest obstacle in our bus system was inconsistent connectivity," said Nick Moran, ITS administrator.

Each Internet failure prevented the on-board vehicle logic unit (VLU) from doing its job, which was to provide GPS/AVL functionality and to communicate with a traffic signal priority (TSP) radio. TSP automatically triggers traffic lights to turn green for buses that are behind schedule.

Inconsistent connectivity was causing VLUs to send outdated information — instead of trustworthy real-time data — to VRT's system, which often caused unnecessary manipulation of traffic lights. Inaccurate information also greatly hindered transit users who depended on VRT's route tracking web portal.

With a new underground public transportation hub looming, VRT knew its connectivity issues were becoming even more complex. With as many as eight buses underground at any given time, how could the agency ensure reliable GPS access?

The agency also had the future in mind. Its existing solution was not capable of allowing the agency to keep up with the U.S. government's 10-year IT&S plan for public transit organizations. Further, VRT wanted to begin offering free rider Wi-Fi.

"We needed the best technology to help us move forward," Moran said.

Solution

For the utmost connectivity and flexibility, VRT deployed Cradlepoint's NetCloud Service fo Mobile and ruggedized wireless LTE routers. The solution includes routing, a Wi-Fi access point, content filtering, GPS, easy integration with AVL platforms, and cloud configuration and troubleshooting.

"It wasn't just a modem for our buses. It was a comprehensive solution," said Billy Wingfield, operations director for VRT.

This solution provides the platform capacity to implement initiatives such as vehicle annunciators and automated passenger counters, all of which are in the organization's five-year IT/IT&S plan.

Benefits

Always-On Connectivity

Whether VRT's buses are in its underground hub or anywhere in Idaho's Treasure Valley, the IT team and drivers can rely on reliable WAN connectivity.

> **Cradlepoint provided a strong and stable solution to our communication problems. We now have an information system that is both dependable and reliable."**
>
> **Kelli Badesheim,**
> Executive Director, Valley Regional Transit

Highly Accurate Real-Time Data

On each bus, a Cradlepoint router is teamed with a multi-zone GPS repeater to ensure uninterrupted vehicle tracking.

"Today the information available to our riders is much more reliable than ever, thanks to our Cradlepoint solution," said Rhonda Jalbert, VRT's development director.

Less Troubleshooting

Constant WAN connectivity and GPS access improve the accuracy of information provided to riders, which translates into fewer phone calls for VRT's customer service team to address.

"We had been averaging 9,000 to 10,000 customer service calls per month. With Cradlepoint, that number has fallen by about 25 percent. The difference saves us an entire full-time employee," Wingfield said.

"Without Cradlepoint, I can't even imagine what our staff hours would be," Jalbert said.

High-Performance Passenger Wi-Fi

Now VRT adds value to its transit service by offering free passenger Wi-Fi. More than 350 passengers per day are utilizing guest Wi-Fi, and that number is sure to rise as the service becomes more well-known.

"Providing free Wi-Fi on our buses has been a huge hit with our riders," Badesheim said.

The agency now has opportunities to easily track Wi-Fi usage, customize its splash page, survey its riders, and pursue various marketing options.

Centralized Network Monitoring & Management

Through NetCloud Manager, VRT's IT team, which covers three locations as well as dozens of buses, can remotely troubleshoot network issues and push out updates across the entire fleet.

"Prior to our Cradlepoint solution, we had been pushing out firmware upgrades between midnight and 4 a.m. to avoid disrupting our services. Today, we can instantly update our entire fleet with the click of a button," Moran said.

Flexibility to Expand at Any Time

With the flexibility to think big, VRT is considering implementing fare boxes that enable payment by credit card or phone, along with real-time monitoring of the CCTV system.

Exceptional Customer Support

VRT benefited from Cradlepoint's expert engineers and 24x7 support both while they deployed their solutions and in the months that followed.

Learn more at cradlepoint.com/transit