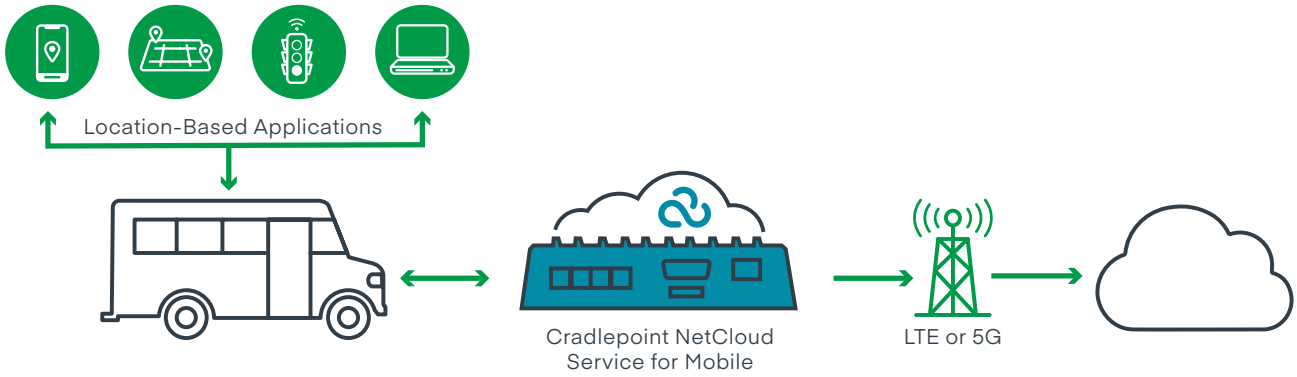
Cellular Connectivity for Location-Based Applications in Vehicles

Using LTE and 5G to ensure accurate real-time data for location tracking

Today's vehicle fleets often leverage technologies and applications — such as AVL systems and rider apps — that improve efficiency and safety but that only work because of constant sending of GPS data from the field to the cloud. Vehicles in industries such as public transit, public safety, private motorcoach, and retail are rendered ineffective once the accuracy of location data is compromised.



Networking challenges

Frequent connection drop-offs

Without the right on-board cellular networking solution, connection reliability and performance in moving vehicles often is inconsistent and lackluster, respectively. The GPS data that drives AVL platforms and other location-based applications is only effective and operational if the WAN links connecting it are consistently available.

Trouble managing widespread solutions within a fleet

A fleet of vehicles usually is dispersed across an entire city, county, or even further, making it difficult for IT teams to monitor connectivity and data security and to address unexpected issues.

Connecting the dots between dead spots

Intermittent connection "dead zones" create information gaps that make it difficult for managers to effectively track the location of vehicles unless specific network management features are available as part of the fleet's mobile solution.

> **The value of being able to see our officers and vehicles in real time is a huge benefit to our organization."**
>
> **Capt. Danny Barron**, Troy Police

Benefits of LTE and 5G for in-vehicle location tracking

Dependable real-time data

Reliable LTE and 5G connectivity through enterprise-grade wireless edge networking routers keeps a fleet's location-based data up to date and accurate. The ability to accurately track vehicles within a fleet can improve operational efficiency and/or the rider experience.

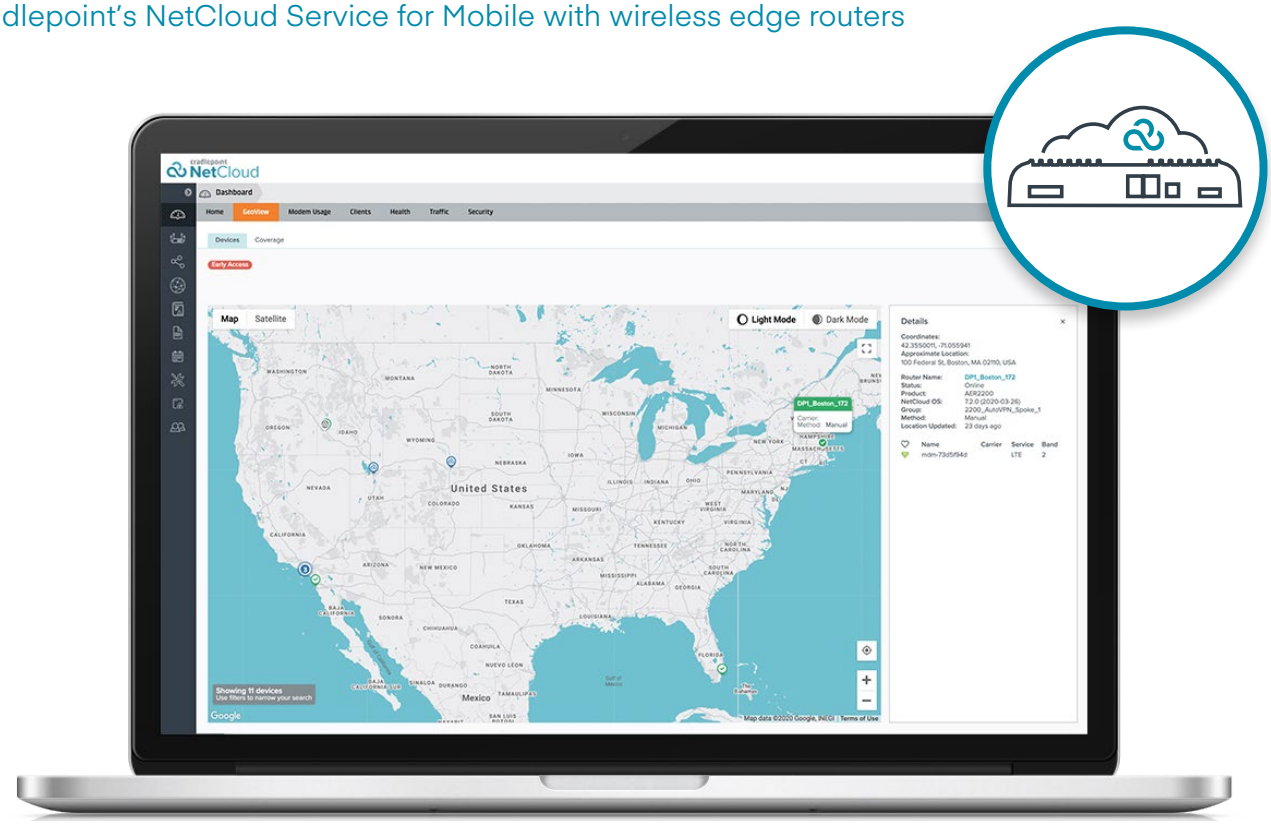
Centralized network management

Cradlepoint's NetCloud Manager enables businesses and agencies to monitor LTE and 5G connectivity and data security for an entire vehicle fleet through helpful dashboards, and to adjust configurations on any wireless cellular router in the field with the ease of point-and-click functionality. IT teams can centrally monitor and manage instead of taking vehicles off the road.

Seamless location tracking for vehicles

Businesses and agencies can accurately monitor the location of their vehicles even through unavoidable dead zones such as tunnels. NetCloud's "dead reckoning" feature is able to calculate the route of a vehicle during a dead period by utilizing the previously determined position, speed, and direction traveling until cellular connectivity and/or the GPS signal is restored.

Cradlepoint's NetCloud Service for Mobile with wireless edge routers



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