

# Remote Monitoring of IoT Data from Sensors

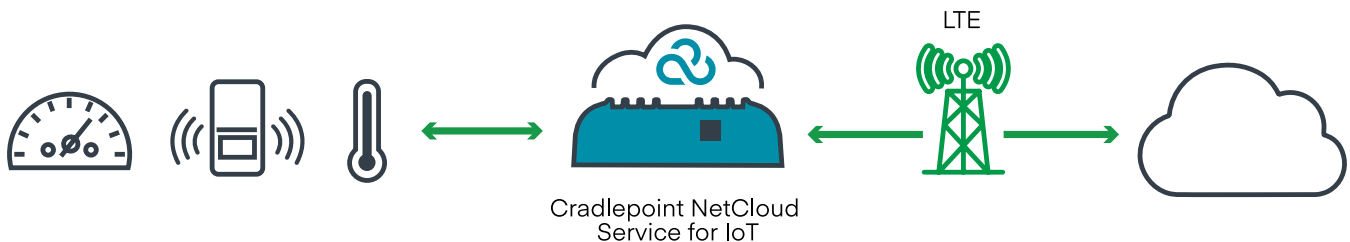
## Using LTE to Send IoT Data to the Cloud or Data Center

For organizations with industrial IoT or public works projects, hundreds or even thousands of far-flung sensors are the lifeblood of business intelligence. In IoT deployments involving supervisory control and data acquisition (SCADA) and other types of data, programmable logic controllers (PLCs) that process data in real time need reliable WAN connectivity — in challenging environments — that is secure and can be centrally managed from anywhere.



***If the Internet connection isn't reliable, our customers won't know the health and well-being of their animals."***

**Alex Heine**, Director of Customer Experience,  
Quantified Ag



## Networking Challenges

### Unavailable or Unaffordable Wired Connectivity

In areas — especially rural sites — where many IoT sensors are deployed, wired connectivity often is unavailable or prohibitively expensive, which is unacceptable for companies that need their IoT data sent 24x7 and in real time. Even when it's available, it's difficult to manage a different regionally based wired ISP in every city.

### Managing Widespread IoT with Lean IT

Keeping track of cellular signal strength, latency, data usage, and outages among IoT devices is unscalable when an organization's IT experts are located far away from the premises. Internet downtime and related network outages usually require expensive corporate travel or third-party truck rolls. As precious time ticks away during an outage, important data becomes unutilized, which can be costly and even dangerous.

## Complexity of Connecting IoT Data to Cloud-Based Services

Many companies implement cloud-based services to help optimize their business outcomes through visibility of and insight into a wide range of actionable data. However, usually this is a tedious process that requires specialized technical expertise. A tedious process that requires specialized technical expertise. Companies that don't have the necessary time or resources must hire costly third-party contractors.

### At-Risk IoT Information

With IoT data flowing to the data center and/or the cloud from potentially locations all over the map, network security is both challenging and essential. MiFis and other consumer-grade solutions don't provide the enterprise-grade security necessary to keep endpoint devices protected from the increasingly sophisticated attacks of savvy hackers.

## Benefits of Cloud-Managed LTE for Remote Monitoring of Real-Time Data

### Highly Available Wireless WAN for Remote Information Monitoring

Cradlepoint's enterprise-grade IoT routers with an embedded LTE modem guarantee high-performance connectivity and constant uptime through nationwide cellular carriers. Modems with dual-SIM functionality provide the ability to immediately and remotely switch carriers in the event of poor signaling conditions — all without loss of data.

### Remote Tracking & Management of LTE Connectivity

With Cradlepoint's feature-rich cloud management platform, companies can set up alerts notifying them of WAN outages and signal fluctuations. When a problem occurs, the corporate IT team can remotely determine the root cause — and often fix the problem — before ordering an expensive truck roll.

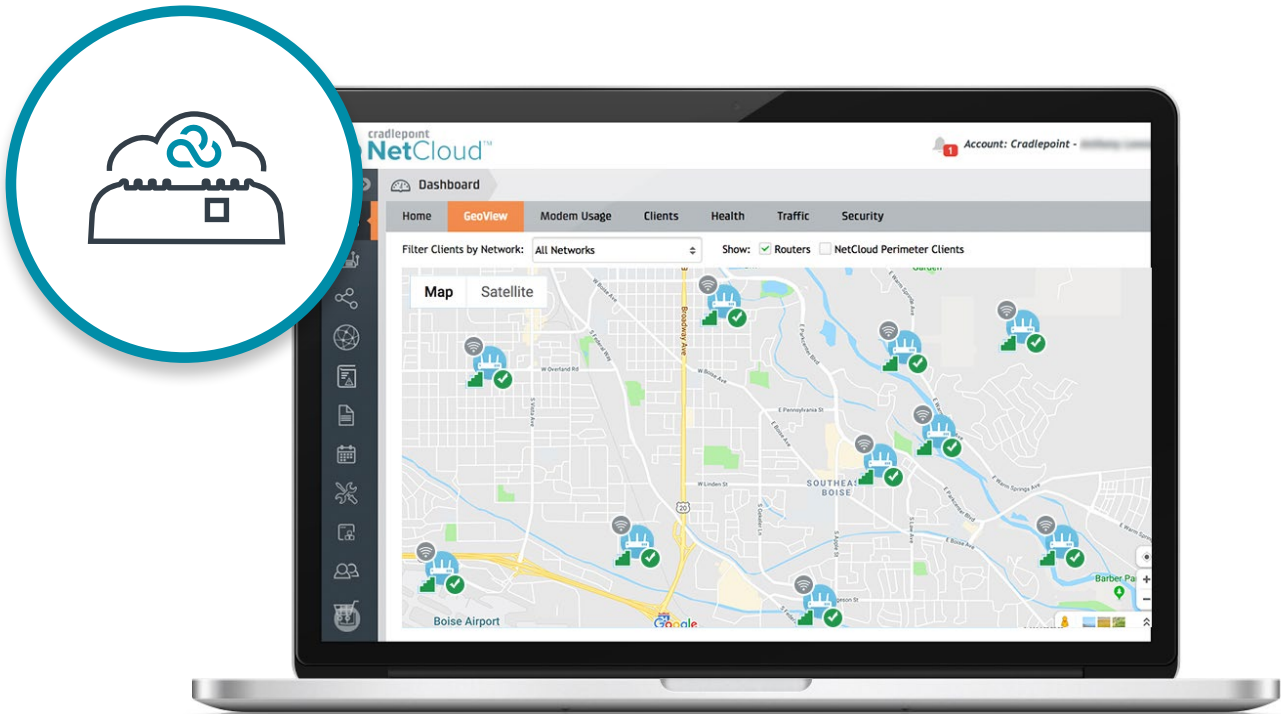
### Simple to Set Up Connectivity Between IoT Devices & Cloud-Based Services

Cradlepoint solutions enable easy setup of secure, bidirectional communication into cloud-based platforms such as Microsoft Azure IoT Central — making remote monitoring systems much easier to deploy and quickly scale, which is a major benefit for organizations that don't have highly specialized technicians on staff.

### Comprehensive IoT Security

Whether the company's data is headed to the cloud or the corporate data center, Cradlepoint's all-in-one routers provide comprehensive security — including a built-in firewall to prevent hacking attempts. Also, IT teams can quickly set up a VPN or a private overlay network, which uses Software-Defined Perimeter technologies to completely isolate and hide information over the public Internet.

## Cradlepoint's NetCloud Service for IoT with LTE Routers



Learn more at [cradlepoint.com/iot-networks](https://cradlepoint.com/iot-networks)