Unlocking the Power of LTE & 5G in Branch Networks

Examples & Success Stories of LTE Edge Networking in Fixed & Mobile Branches

cradlepoint
Connect Beyond

Table of Contents

cradlepoint

The Digitally Transformed Branch Needs a New Network

Today companies engage with their customers in new ways and places. Pop-up branches at large events, temporary seasonal storefronts, and branches inside large box stores allow businesses to extend their reach and find new customers. IoT devices, digital signage, customer WiFi, and cloud applications offer new services and experiences to customers. And these businesses are turning to LTE and 5G to support their branch transformation.

Branch Requirements at the Edge of the Corporate Network

Unrelenting Internet Connectivity

For organizations with revenue-generating or mission-critical branch locations, the costs of even 1 hour of network downtime can be crippling. Everything from Point-of-Sale devices to IoT and M2M devices and operations apps need an always-on Wide Area Network (WAN).

Business Agility

Time is money, which is why the ability to get network access immediately is so significant for enterprises that open a lot of new branches. Companies need edge solutions with the agility to support and optimize multiple types of WAN links, allowing Day-1 availability for immediate business operations.

Security for all Types of Traffic

Branches today deal with numerous types of traffic, including direct-to-internet traffic, IoT information, and data that must be sent to back to the corporate data center. Flexible security features are the only ways to accommodate such diversity.

High Network Performance

More and more branch-office applications need ample bandwidth and exceptional performance to deliver the usefulness and cost-effectiveness that companies require. Examples include bandwidth-intensive applications such as voice and video.

Simplicity & Flexibility of Network Management

Few companies with multiple branches place full-time IT professionals at each site, which means the ability to deploy them easily and configure, monitor, manage, and troubleshoot them remotely is essential.

Among wide-area network (WAN) influencers whose organizations use LTE[1] ...

— More than half (52%) use LTE as a primary connection, and 29% plan to in the near future.

— Nearly half (48%) rely on LTE as a backup connection.

1 **Source** 2019 State of the WAN Report

Why Enterprises Integrate LTE into Branch Architecture

Highly Available

Reliable

Fast

Quick Deployment

Cost-Effective

Today's Branch Architectures Depend on LTE

The convergence of new priorities in the branch and the evolution of cellular-based broadband is driving businesses to discover vital roles for LTE within their network architectures.

Overlay Failover & OOBM

Use LTE to extend wireless failover and Out-of-Band Management to any primary router.

Day-1 Availability

Use LTE for Day-1 network availability when the arrival of wired lines is taking too long.

Pop-Up Network

Use LTE for cost-effective and consistent temporary network access in any location.

Store-Within-a-Store

Use LTE to enable secure operations and customer service within another enterprise's building.

Software-Defined Branch

Use one SD-WAN solution to enable all branch networking needs, including LTE, other types of WAN links, and information security.

Link Failover & Out-of-Band Management (OOBM) for Branch Continuity

Even a few minutes of downtime — especially during peak business hours — can cripple a company's revenue, costs, security, and brand credibility. A couple of key WAN challenges often limit branch continuity, which is the ability to keep branch locations up and running at all times.

⚠ Main Challenge: WAN Link Failure

Overlay LTE Failover for Branch Continuity

Protecting WAN Uptime

With LTE failover solutions, business policies can automatically send traffic across the wireless link as soon as the primary wired link degrades or fails. Once the wired link is restored, traffic flow returns to normal.

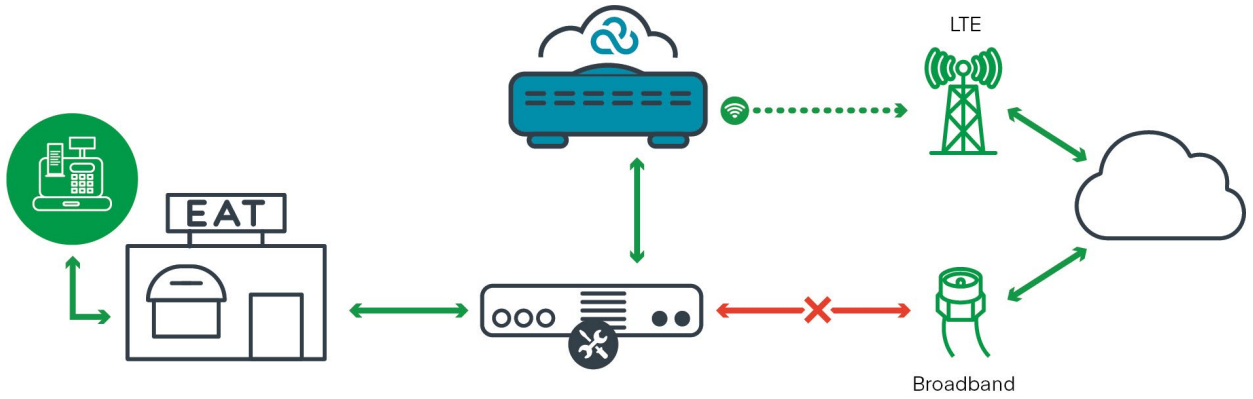
The speed of today's Gigabit-Class LTE rivals that of most wired broadband services, which allow organizations to configure most if not all applications to continue running even during failover.

An LTE adapter offers seamless LTE integration into networking and SD-WAN infrastructure, protecting against network outages.

Cloud-Managed OOBM Addressing Router Failure

With a direct connection from the console port of the LTE adapter to the primary router, IT staff can connect to the router over the air, even if IP and Ethernet are unavailable or not functioning on the primary router.

With Cradlepoint's OOBM capabilities, administrators can diagnose and/or fix the problem without leaving the office, rolling a truck, or paying for slow and expensive POTS lines.



David's Bridal Protects Uptime & Key Applications with LTE Failover

Retailer Easily Adds Cloud-Managed Overlay LTE to Existing Branch Architecture

Challenges

David's Bridal needed to reduce network downtime in retail stores throughout multiple countries and consolidate multiple disparate solutions to reduce laborious updates and management complexities.

Solution

David's Bridal leveraged Cradlepoint's NetCloud Service for branch continuity, delivered through purpose-built LTE adapters, which maintained a constant connection to cellular and was always ready to take over in case of a failure in the wired WAN link.

Benefits

David's Bridal now has high-performance wireless overlay failover with ample flexibility and reliability. Robust cloud management capabilities allow the IT team to monitor and troubleshoot the network remotely, including over-the-air OOBM.

> "With just a couple of clicks, I can use NetCloud Manager to upgrade all 330 devices in less than 10 minutes. That saves us a lot of labor and got our stores protected very quickly."

Kevin Weaver,
Director of Infrastructure, David's Bridal

Day-1 Connectivity

Many enterprises regularly open branches with strict deadlines in order to meet revenue and business goals. These organizations can't afford the uncertainty and delay of waiting for the installation of wired lines for network connectivity. So, how do new branch locations get Internet access quickly?

⚠ Main Challenge: Waiting for Wired Line Installation

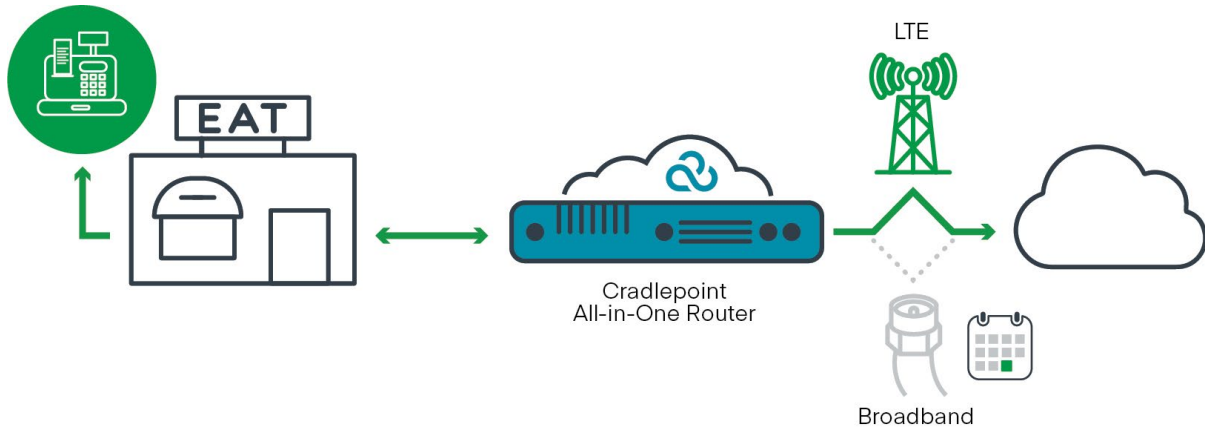
LTE for Day-1 Branch Network Connectivity

Setting Up Cellular Broadband Immediately

With cloud-managed all-in-one branch routers featuring embedded high-performance LTE as the primary link, IT teams ensure Day-1 connectivity at new locations — without having to wait for a wired link. With this solution, businesses can open locations on schedule without the network holding them back. Later, once the wired connection is up and running, the organization can use that same multi-WAN primary router to either load balance between wired and wireless links or use the wireless link for failover.

Deploying & Managing the Solution from Anywhere

Some wireless solutions can be set up even without IT staff on location. Cloud features for zero-touch deployment provide secure Internet and corporate network access immediately. A store manager can get the router up and running within just a couple minutes.



PANDORA Jewelry Used LTE for Instant Connectivity Prior to Opening

Retailer Used Cradlepoint's NetCloud Service & Routers to Save at least $50,000

Challenges

When a labor dispute within a local ISP threatened to derail opening day for a new PANDORA Jewelry store, the retailer sought a solution that would temporarily replace the need for wired Internet. Failure to open would have cost the company penalties and forced them to miss out on huge holiday shopping revenue.

Solution

PANDORA leveraged Cradlepoint's NetCloud Service for branch, delivered through purpose-built LTE-enabled routers. Because of the ubiquity of cellular coverage, the company was able to create a reliable, secure connection for its stores without waiting for wired broadband.

Benefits

PANDORA had immediate cellular broadband access while the IT team waited for wired lines to be installed — enabling the store to open on time and to save at least $50,000 in potential losses. Later, once wired broadband was available, the Cradlepoint router configuration was changed to leverage LTE for instant over-the-air failover.

> "Being able to open meant we were able to build the awareness necessary to maximize holiday sales. Just missing opening our doors by a few weeks could have cost us more than $50,000 in sales and expenses."

Ashley Walther,
manager of PANDORA's Park City Center store

Pop-Up Networks

Pop-up networks are increasingly important across a broad range of industries, helping organizations serve customers and do business in innovative new ways. Trends toward IoT, field workforces, connected vehicles, and temporary retail are driving the need for pop-up connectivity that is secure, easy to deploy anywhere, and can be monitored and managed without sending IT professionals to each site.

⚠ Main Challenge: Unavailable or Unreliable Wired Connectivity

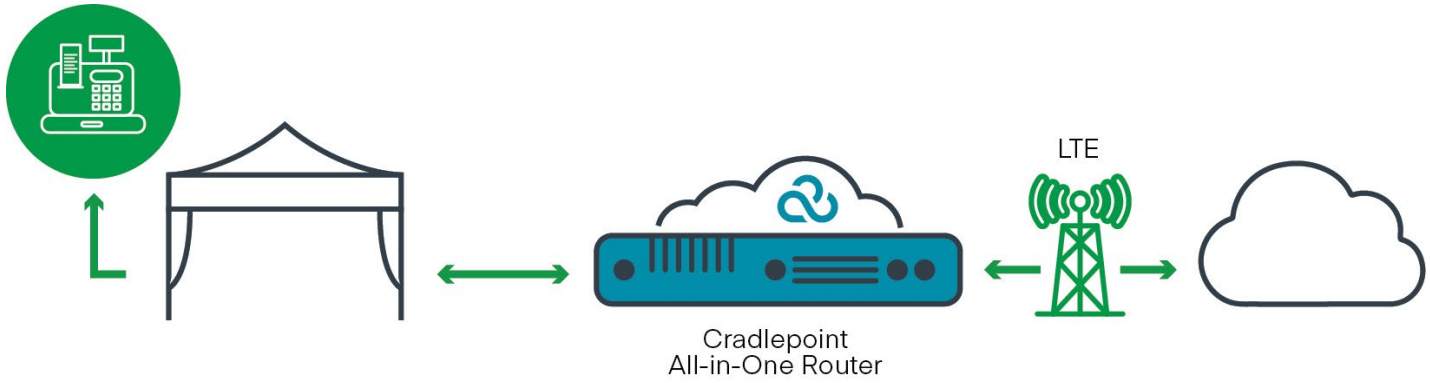
LTE for Pop-Up Network Connectivity

On-Demand Wireless Access

Many organizations ensure reliable pop-up connectivity through cloud-managed LTE-enabled branch routers. With the ability to create secure LTE connections and make WiFi available, companies have the flexibility to set up instantly, enabling high availability for important applications.

Standardized & Consistent WAN Pricing Everywhere

LTE is a plug-and-play option that standardizes a company's pop-up WAN costs across the entire country, with reliance on one or two network operators instead of a different ISP in each and every town.



FOX Sports Reduces Pop-Up WAN Costs with LTE

Cradlepoint's NetCloud Service & Routers Enable Connectivity During Live TV Broadcasts

Challenges

During national televised sports events and off-site company meetings, the FOX Sports staff need access to information, web applications, and devices. The lack of wired network options and the high cost of temporary Internet are constant challenges, as are potential setup delays.

Solution

Cradlepoint's NetCloud Service for pop-up branches includes WAN link termination and traffic management, a firewall, and cloud configuration and troubleshooting, all delivered via a purpose-built router with embedded LTE. This allows a secure, reliable network to be built wherever, and whenever, FOX Sports needs it.

Benefits

FOX Sports leverages LTE to cost-effectively guarantee network access at every location they travel to — ensuring that on-set employees and vital applications always stay connected during live national TV broadcasts. They also have standardized on one or two cellular operators instead of being at the mercy of local ISPs from one city to the next.

> "It would be devastating for the Internet to go down during a live TV show. It's extremely critical for our staff. Our portable communication cases and Cradlepoint routers deliver the always-on connectivity that is so essential for our team."

Raul Ramirez,
Director of IT Broadcast Operations, FOX Sports

Store-Within-a-Store

Many big-box stores or large facilities such as airports invite third-party vendors such as kiosks, restaurants, tax preparation companies onto their premises — but with an understanding that these invited guests will bring their own network. Keeping other businesses completely off the main WAN is the best way for the larger venue to keep its network secure and avoid unpredictable bandwidth demand.

⚠ Main Challenge: Quickly Getting a Physically Separate Network Within a Larger Store

Bring Your Own Network with LTE

Easily Deployed Day-1 Network Availability

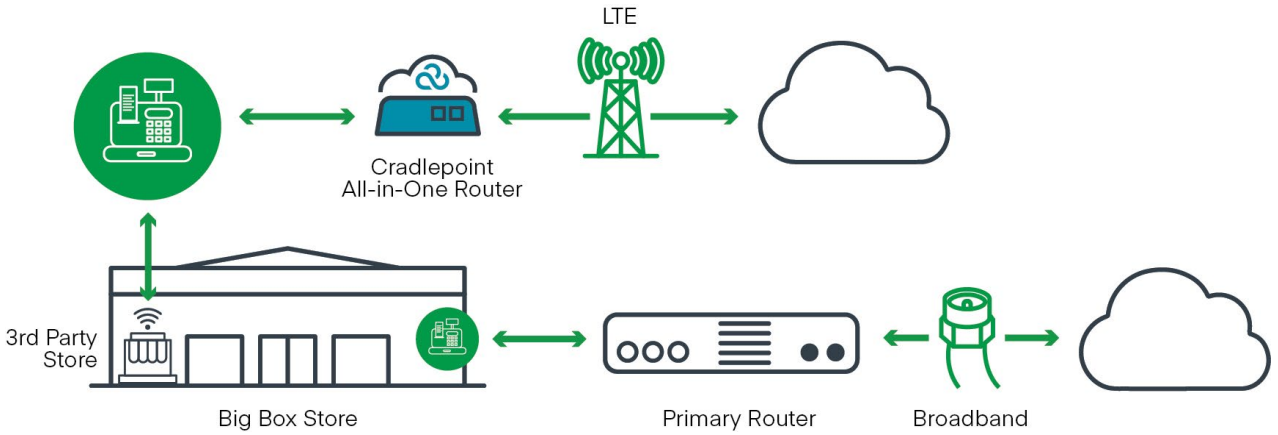
Businesses preparing to open a store within a larger location can get Internet access — and a secure connection to corporate headquarters — through cloud-managed plug-and-play LTE routers.

Remote Visibility Into & Control of Distributed Networks

With LTE and a full-featured cloud management service, IT professionals at headquarters or managed service providers can remotely monitor WAN conditions and data usage at each location — saving money and fixing issues much more quickly.

Built-In Information Security

Even without any access to the main store's network stack and security applications, the store-within-a-store can protect important customer and company data through an all-in-one branch router with a built-in firewall and support for cloud-based security services — providing peace of mind for both the big-box store and the smaller enterprise.



LTE Separates Jackson-Hewitt Tax Services from Big-Box Networks

Cradlepoint's NetCloud Service Enables Easy-to-Deploy 'Bring Your Own Network'

Challenges

During tax season, Jackson-Hewitt tax preparation kiosks in big-box stores throughout Georgia need Internet access and phone service immediately, but they aren't allowed to connect to the host store's network — and deploying a wired line at each location is complex, expensive, and a lengthy process.

Solution

These Jackson-Hewitt tax preparation areas leverage Cradlepoint's NetCloud Service for branch to provide the cellular-based connectivity the employees need — without the provisioning or installation hassles of DSL or cable.

Benefits

LTE allows Jackson-Hewitt to get its kiosks up and running in less than an hour, with one carrier instead of a different ISP in each town — and without any need for third-party assistance. Built-in features enable the information security they need, along with total physical separation from the larger store's network.

> "I walk in with everything I need. With the Cradlepoint router, in less than an hour, the kiosk is up and running and ready to go. No waiting."

John Beazle,
Franchise Owner, Jackson-Hewitt

Software-Defined Branch

In branch environments, the continued influx of IoT devices, mobile workers, cloud-based apps, direct-to-Internet traffic, and technology-expectant customers have made high availability and excellent agility — along with data security — more important than ever. Organizations are looking for multi-WAN, highly automated SD-WAN routers at the edge of the network.

⚠ Main Challenge: Meeting Broad Branch Needs Without Expanding the Networking Stack

Integrate LTE & SD-WAN Through One Edge Solution

Simplified Branch Infrastructure

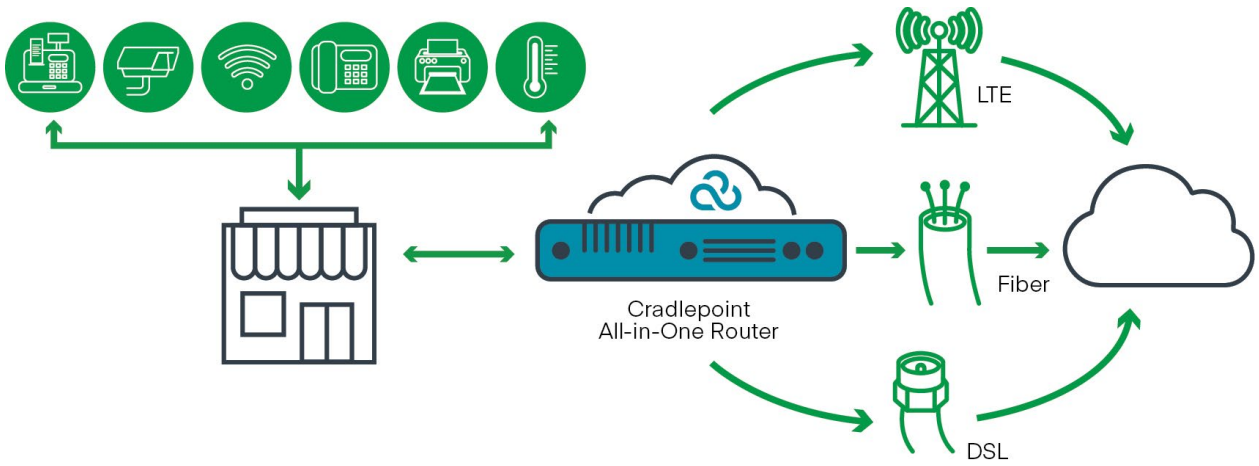
Some SD-WAN routers offer built-in LTE, multi-WAN functionality, easy VPN setup, WiFi, routing, and a firewall while supporting the network reliability, remote visibility and control, automation, and application performance available through software-defined networking technologies.

Remote Management of Network Functionality at Many Sites

With the sheer quantity of network applications running in most branches, cloud monitoring and troubleshooting features — including automated alerts — provide the only way to cost-effectively manage WAN conditions at widespread locations.

Automation for Better Application Uptime & Performance

Using business policies to automate path selection and network traffic choices is imperative for businesses that can't afford for certain applications to falter due to wavering signal strength or heightened latency.



Restaurant Chain Protects Uptime & POS with LTE-Enabled SD-WAN

Piada Reduces Hardware by Running Wired & LTE Through Cloud-Managed Routers

Challenges

There are nearly 40 Piada restaurants, all of which rely on several connectivity-dependent tools and services. When the Internet is down at one of these locations, these services are unavailable, which greatly hampers the customer experience and threatens the bottom line.

Solution

Piada replaced its legacy architecture of strictly wired firewall devices with Cradlepoint's NetCloud Service for branch. The service includes routing, WAN link termination and traffic management, a firewall, and cloud configuration and troubleshooting — delivered via a dual-modem branch router with embedded LTE.

Benefits

This comprehensive SD-WAN solution enables Day-1 connectivity in preparation for each store opening, then allows simple remote configuration changes once wired lines are available for the primary WAN. Setting up VPNs and cloud-delivered third-party security apps at each location is easily done from headquarters, as is automated wired or wireless failover based on preset business policies. An outage of any WAN link is easily handled by failing over to the wireless link, allowing the business to continue to serve its customers.

> We can easily deploy and manage several hundred stores with our small staff – and without NetCloud and these devices, that would be impossible to do."

Dave Gifford,
Network Coordinator, Piada

Discover the Right Solution for Your Enterprise

Learn About Cradlepoint's LTE-Enabled Branch Networking Solutions

Learn more about Cradlepoint's NetCloud Service for branch, delivered through multi-WAN endpoints with built-in LTE. There's a solution for all of your branch use cases, including failover and OOBM, Day-1 connectivity, pop-up networks, store-within-a-store, and SD-Branch.

EXPLORE SOLUTIONS ›

Explore the Benefits of NetCloud

Watch a Brief Demo Video About Cradlepoint's NetCloud Service

Watch this brief video to see how network managers and IT professionals can use Cradlepoint solutions in three real-life situations: building a reliable network, setting up a secure network, and proactively responding to network issues. NetCloud Manager (NCM), Cradlepoint's cloud management platform, provides a single service to deploy and manage all Cradlepoint LTE networking solutions.

WATCH DEMO ›

Learn more at cradlepoint.com