Blackfoot Communications®

Failover and Out-of-Band Management for Branch Continuity

Using LTE and 5G to ensure network uptime for critical applications

Networking challenges

WAN downtime

What if during peak business hours, while sales are booming and your critical data is being updated, your company's wired Internet connection were to fail at one or more locations? For organizations with distributed fixed and temporary locations, the consequences of just a few minutes of downtime ripple across the entire company—impacting revenue, costs, security, and brand credibility.

Router failure

Link failure is not the only cause of a serious wide-area network (WAN) issue. Routers can go down for various reasons including misconfiguration of an access control list, bouncing an interface, shutting down the wrong interface, unresponsive devices after reboots, and DNS issues. In many cases, the router may be unable to receive or send IP or Ethernet traffic, making remote IP troubleshooting impossible.

Without branch continuity solution

Router is down   **OR**   30-60 days to install wired broadband services

OR   Wired broadband outage
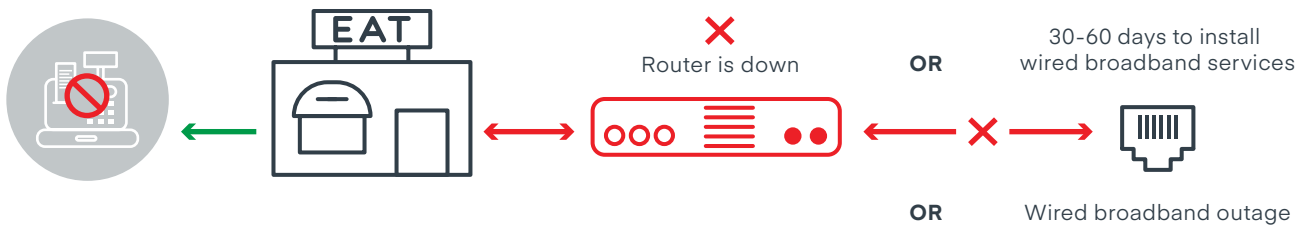
Traditional options for high availability

There are several options that organizations pursue to achieve higher WAN availability. Redundant wired services can be deployed as active or failover links. However, wired services usually follow the same path and trench, and they typically go down together. Also, adding T1 and T3 lines can greatly increase costs across multiple sites.

On the WAN router side, there are three main options for addressing router failure. First, organizations can store preconfigured spares at the location and train local employees to set up the router. Second, organizations have historically used Plain Old Telephone Service (POTS) for Out-of-Band Management (OOBM) to dial into routers. Third, the organization can pay to send a service truck to the location to troubleshoot the out-of-service router.

> "90% of issues with land-line disruptions are in the last mile, so when your primary land-line goes down, chances are that your secondary land-line — the one you're using for redundancy — will go down too."
>
> Constantini Koutrais,
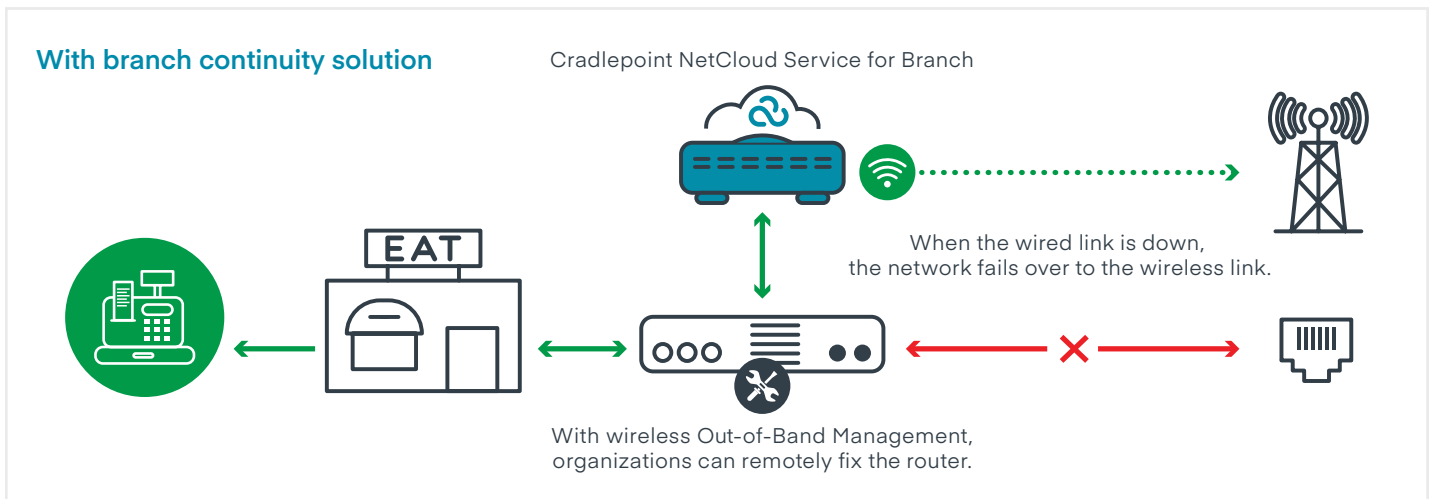> Systems Administrator, Blinds to Go

Benefits of LTE and 5G wireless edge solutions for branch continuity

Solution for WAN downtime

In contrast to wired failover or redundant services, which typically use the same last-mile trenches and backhaul pathways, an LTE or 5G based failover solution offers a diverse pathway through the air. With a Wireless WAN connection in place, policies can immediately direct traffic to pass across the wireless link. Once the wired link is restored, traffic flow automatically returns to normal — in most cases, unnoticed by users and customers. With SD-WAN capabilities available, users can set granular traffic policies across multiple wired and wireless links.

While many organizations are concerned about the throughput speed and cost of Wireless WAN links, today's cellular broadband speeds rival most wired broadband services. Further, with deep cellular analytics and the onset of flat-rate business pricing, LTE and 5G can serve as a very cost-effective WAN link.

As organizations deploy highly available LTE into their stores, offices, and other locations, often they are conscious of their current network investments. Cradlepoint offers seamless cellular integration into an organization's current networking and SD-WAN infrastructure.

With branch continuity solution

Cradlepoint NetCloud Service for Branch

When the wired link is down, the network fails over to the wireless link.

With wireless Out-of-Band Management, organizations can remotely fix the router.

Solution for router failure

To mitigate the effects of an unreachable router, Cradlepoint's LTE and 5G adapters offer an efficient OOBM solution. With a direct connection from the console port of the adapter to the router, network administrators can connect to the router over the air, even if IP and Ethernet are not functioning or available on the router.

Multiple routers can be connected using a USB-to-serial splitter. Devices connected to the router(s) can also be securely accessed via SSH protocol. 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.

Explore this solution at **cradlepoint.com/branch-adapters**