



# 4G Failover for Business Continuity

Maximizing Revenue & Minimizing Risk to Your Brand

## WHAT YOU'LL GET:

- + 3 options & evaluations for increasing network resiliency.
- + Criteria for choosing a 4G LTE failover solution.
- + American Apparel & Blinds to Go customer success stories.
- + An overview of Cradlepoint's benefits and solutions.

## NETWORKING STRATEGIES FOR DISTRIBUTED ENTERPRISES

What would happen if during peak business hours, while sales are booming and your critical data is being updated, your company's wired Internet connection fails at one or more locations?

For many distributed enterprises with branch offices, the consequences of just a few minutes of downtime will ripple across the entire company's operations to include:

- + An immediate hit to revenue from the Point-of-Sale (POS) system failure
- + Non-PCI compliance leaving your organization open to security risks and fraud
- + Inventory management systems become inoperable, halting operations
- + Cloud-based applications for communications, security, and data storage stop syncing
- + IT service providers or other vendors step in, resulting in costly truck rolls and wasted time identifying and repairing the problem
- + Damage to brand reputation and loyalty resulting in further loss than revenue alone

It's a scenario that no enterprise wants to face, but with primary Internet service providers only offering 99.5% availability standard (which equals about 4 hours of downtime monthly), the question isn't if your Internet connectivity will go down, but *when*. According to Gartner, every hour of downtime can typically cost an organization \$300,000 per hour. That is why it is imperative to have a plan for business continuity in place.

### A GROWING PROBLEM

Distributed enterprises can increase Internet availability by installing a T1 line or try to reduce risk by adding service redundancy. A T1 line can cost nearly ten times more than a DSL or cable line.<sup>2</sup> Upgrading to a T3 line will increase availability to reach nearly 99.99% ("four-nines") availability, however, such measures can be too costly to implement and maintain. T3 lines can cost at least three times more than a T1, and often negate any return on investment for business continuity.<sup>3</sup> All this means that as a solution for hundreds (or thousands) of distributed locations, the costs would be astronomical, resulting in only a minuscule improvement in reliability.



**60% OF IT EXECUTIVES REPORT HAVING TO CONTEND WITH NETWORK DOWNTIME AT LEAST ONCE A MONTH.<sup>1</sup>**

## SUCCESS STORY: AMERICAN APPAREL

### A SOLUTION

In contrast to wired failover solutions or redundant service, 4G LTE technology offers always-on, cost-effective connectivity. As a failover solution, wireless offers speeds fast enough to keep your network humming. The relatively low cost of 4G LTE for business continuity means a greater return on investment and scalability for multiple locations, for which other options are just simply cost-prohibitive. With a wireless 4G LTE failover solution, distributed enterprises can enjoy the same reliability and competitive advantage as large enterprises.

Organizations seeking a business continuity solution that can be trusted for always-on network connectivity should consider deploying a 4G LTE-enabled solution to ensure maximum uptime, speed-to-deployment, cost-effective scalability, and ease of management with limited IT resources.

### SURVEYING THE OPTIONS: UPGRADES, REDUNDANCY, AND FAILOVER

There are three options for increasing network availability and addressing the problem of a single point of failure:

1. Purchasing network technology upgrades
2. Adding wired redundancy
3. Deploying a 4G LTE failover solution

The following summarizes each option and discusses the advantages and drawbacks with each solution.

#### UPGRADING TECHNOLOGY

In a technology fueled world, POTS and ISDN lines do not offer enough bandwidth or reliability to run mission-critical applications. By upgrading from Ethernet, DSL or cable to T1, an enterprise can increase Internet availability, reducing downtime from four hours per month to fifteen minutes. However, T1 lines also do not provide enough bandwidth for most enterprises to run all of their day-to-day applications.

American Apparel is a vertically integrated manufacturer and retailer. All phases of production, from cutting and sewing to marketing and photography, are done at the company's downtown Los Angeles factory. American Apparel has more than 280 stores globally. Its L.A. factory is the largest sewing facility in North America.

**“The original impetus to work with Cradlepoint grew from American Apparel’s need for a wireless failover solution to guarantee uninterrupted Internet access.”**

– OSVALDO HURTADO, AMERICAN APPAREL'S DIRECTOR OF STORE IT INFRASTRUCTURE

The locations also required PCI Compliant Internet access to process credit card transactions and handle mission-critical applications. Cradlepoint routers enable American Apparel to keep hundreds of its international retail locations online through wireless 3G/4G. The stores can also use Cradlepoint routers to create private networks to company headquarters.

To manage its network of routers, American Apparel uses Cradlepoint's cloud-managed network solution, which allows them to centrally deploy, configure, and manage all of their devices across different retail stores to improve the reliability and enhance the intelligence of their network.

## ADDING WIRED REDUNDANCY

As mentioned before, adding wired redundancy for hundreds (or thousands) of locations can be extremely cost prohibitive, not to mention that most wired lines are laid in the same trench so the wired redundant line is subject to the same physical damage as the primary WAN connections. It is also key to note that when wired lines are damaged it can take weeks to months to repair, resulting in devastating loss to any organization.

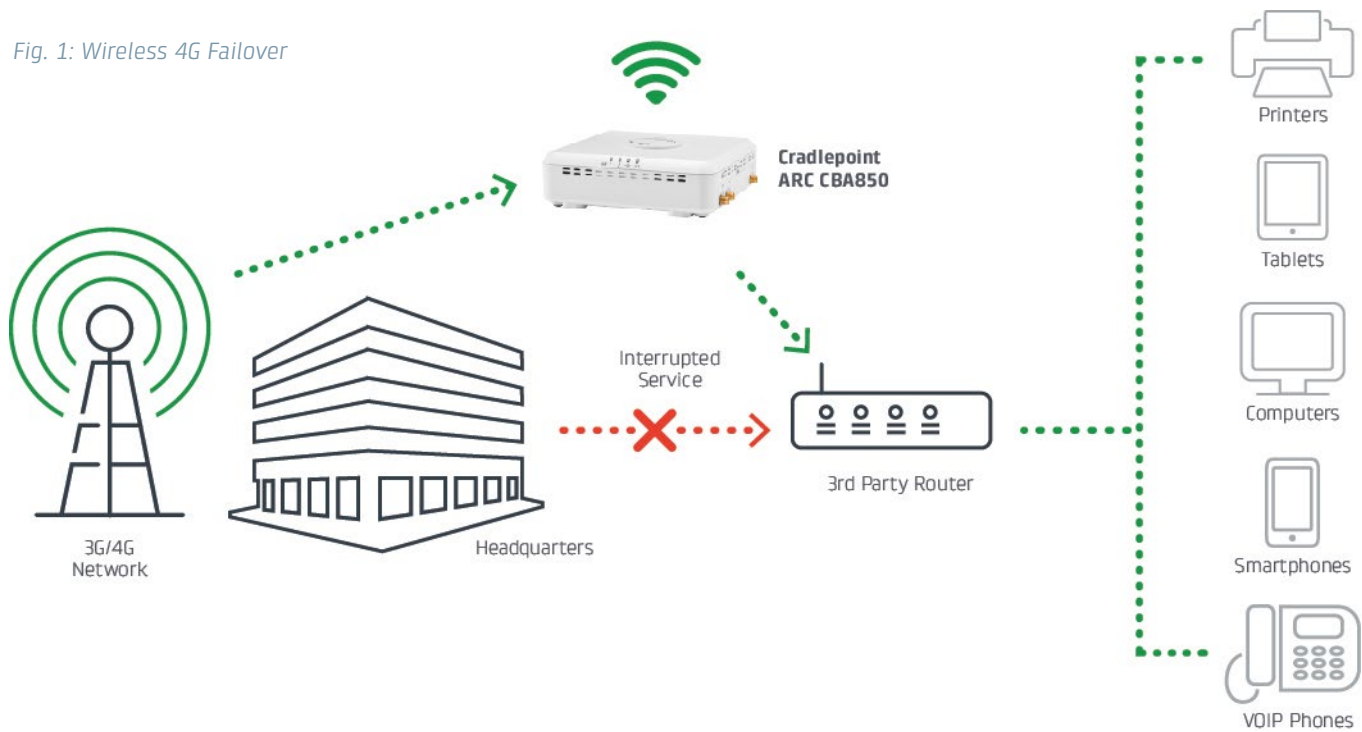
## CHOOSING A 4G LTE FAILOVER SOLUTION

Distributed enterprises seeking business continuity solutions have unique needs, depending on geographic distribution and the number of locations requiring service. Decision makers should consider the following three criteria when choosing a 4G LTE business continuity solution:

1. *Does the solution offer simple, scalable deployment, maintenance and control over hundreds or thousands of distributed locations.*

Because distributed enterprises often do not staff a full IT team at each location or branch, a scalable solution should enable remote management, monitoring, and configuration in order to limit truck rolls and personnel needed to maintain the distributed network.

Fig. 1: Wireless 4G Failover



Additionally, data usage is a concern for enterprises that choose 4G LTE wireless service for failover protection. Each location may have changing data needs from month to month, so a cost-effective failover solution must allow for real-time monitoring of data usage and load-balancing for maximum return on investment.

2. *Does the router integrate with existing network infrastructure, or provide an all-in-one solution to replace current router and modem.*

Those enterprises seeking “overlay failover” – a solution that meshes with the existing wired primary connection – should seek an IP pass-through solution with the ability to convert the broadband signal to Ethernet.

3. *Does the solution enable various network security architectures, such as virtual private networking (VPN), cloud-based security, network segmentation, and/or parallel networks.*

Because distributed enterprises frequently transmit highly sensitive data (e.g. credit cards), and often do not have IT personnel on site with security expertise, locations can be vulnerable to data breaches.

As with the primary network, the business continuity solution should be optimized for maximum security and PCI compliance so that a primary network outage does not constitute a security risk. An ideal failover solution should have the flexibility to merge with the enterprise’s existing security architecture.



**EVERY HOUR OF  
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TYPICALLY  
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ACCORDING TO  
GARTNER.<sup>4</sup>**