# Making Route Diversity Affordable, 4G/LTE is for Any Size Business

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The loss of Internet connectivity often results in disaster for the conventional business owner. Not only are they be unable to conduct business with suppliers, they also find themselves unable to look after their customers business needs, their employees, and partners. Failure to maintain route diversity leads to overwhelming loss.

With the development of 4G and LTE wireless capabilities, access to real route diversity is becoming affordable and highly credible for businesses of all sizes.

## Your Business Has Backup But Does It Have Route Diversity?

With additional Internet connections being provided by many companies, true route diversity is only achieved by few. Protecting you from any of the failures that may have occurred in the provider's network on the other side of the central office is what you are banking on when using the backup Internet connection that uses the same route. With that being said, it is better than not having a backup. However, the effectiveness will be slim in the colossal amount of failures.

Having true route diversity from a different carrier that uses a different route is what is needed for complete backup protection.

Doing this through landlines is the traditional method. Additional poles, excavating, wires, repeaters and other expenses that quickly add up are usually required. Wireless connections that have slow speeds and high latency made this choice less than perfect for some businesses.

The situation has changed with the arrival of 4G/LTE; making wireless access an excellent option when it vcomes to achieving true route diversity and an affordable Internet backup system.

## Internet Backup Methods

With the significance of backup Internet connections being acknowledged by companies, they have put in place a plan of action that provides another source if  primary Internet connection becomes unavailable. Diversified levels of worth and productiveness are options that are offered.

## Another Provider using the Same Route

This method would be the most feasible outcome as additional poles and repeaters, extensive excavation, and whatever other expenses would arise, would not be needed. With the delivery of the backup service coming from the same central office and using the same route travelled as the primary service would cause an abundance of problems if both services happen to go down at the same time. Using a different carrier only protects against network failures with that carrier and not provide true route diversity.

## Using the Traditional Approach to Route Diversity

Building dual-entrance facilities will achieve true route diversity. The means to do this is by having two different carriers that each use a separate route for their line enters the company through access points that are broadly separated. These access points are generally on opposite ends of the building. This approach is effective but can only be used by larger companies given its costly expense.

## Route Alternatives using Wireless Carrier

Satellite, Traditional Mobile Broadband and Fixed Wireless also have wireless options for providing backup Internet access for businesses that cannot af-

ford dual-entrance facilities. With these options there are also shortcomings and challenges.

**Satellite** – Connection is more conservative when getting service through satellite, but due to its high data transfer time it has limitations. This connection also has low bandwidth and vulnerability due to weather disruption.

**Traditional Mobile Broadband** – Costs may be lower but this too also has a high data transfer time and low bandwidth which isn't practical with manbusiness solutions. Especially when streaming multimedia and real-time data flow. A major issue is that there is unreliable signal strength throughout the building.

**Fixed Wireless** – This is a wireless connection that is direct from the business to a tower that provides a good quality service. Sometimes impossible to achieve, it requires uninterrupted line-of-site availability. Another issue is weather disruption.

**With these options being a more affordable solution for businesses, the creation of high-quality, seamless backup system for Internet connections, fall short. 4G/LTE may be the solution.**

## Changing Backup Strategies With 4G/Lte

Offering higher speeds and greater coverage has been a battle for wireless companies for years. Crossing and important threshold by increasing the speed of data transfer making it more practical for business has been achieved with the advancement from 3G to 4G/LTE. This has made it possible to wirelessly connect essentially to any application or system across the Internet thus achieving good or excellent results. An important and superior outlook for companies to use a high-quality, backup system with true route diversity that is affordable.

# 4G/LTE Backup System has its Advantages

Comparing to both a route diverse landline and any other alternatives discussed under Carrier Route Alternatives should be done when considering a 4G/LTE backup system.

**Speed** – A download speed of 10-20 mbps and 5 mbps upload is offered by 4G/LTE. Being 10-20 times faster than 3G it is more than adequate for most needs.

**Wireless** – there is no dependence of poles, wires or landline hardware that is associated with the vulnerable local loop.

**Lower Data Transfer Time** – 4G/LTE has a data transfer time of less than 50 ms, which is required for real-time video streaming and voice.

**Data and Voice** – good for Internet and VoIP backup redundancy **Coverage** – 4G/LTE has improved in-building penetration

**Footprint** – national coverage is good and growing

**Installation** – completed in a few days, compared with 60-120 days for dual-entrance facilities.

**Simplicity** – setup is simple and very little hardware is required.

# The Wireless Backup System Components

The wireless Internet backup system has two ways it can be setup.

**Mobile Hotspots** – the simplest with cost approach being lower. The only requirement is a device that has mobile hotspot capability enabling Wi-Fi connections for individual computers. Being able to connect with 5 or more is a typical mobile hot spot device. Office PC's will also need the capability of using a Wi-Fi connection. There will be no necessity of network wires or equipment. With using mobile hotspots, you have a lower security level and no firewall. Not requiring security credentials or compliance make these spots good for less sensitive content and applications.

**4G/LTE Routers** – a good choice for companies that need higher security or they find Wi-Fi to be impractical for their buildings. The 4G USB cards in the router receive the signal. It then distributes it through your existing network. Going through your firewall, it is much more secure. Auto failover is also offered.  It seamlessly transfers from your primary Internet connection to the wireless backup system and back again as necessary. In order to accommodate the various amount of users, different numbers of USB cards can be added. This allows load balancing to best handle the changing data flow.

## 4G/Lte Internet Backup Should Be Used By Whom

**Small and mid-size** companies are well suited with 4G/LTE wireless Internet backup since they rely on their Internet connections to do business. With the greatest majority of their regular activities and applications this is an excellent choice. For massively large data usage it isn't the best solution. This is because wireless carriers charge on a measured usage basis. There is no longer unlimited data. 10 gigabytes is currently the maximum plan (at the time of this printing). If you go over your plan limit you pay more money. If you do a sufficient amount of streaming video, music and multimedia, your current plan will be exceeded and that will prove to be quite costly.
Performing a complete assessment in order to determine how much lost Internet connectivity would cost your business is the first step in deciding whether or not you should install a 4G/LTE Internet backup connection. Direct and indirect costs are also a consideration. This includes lost opportunities, decreased productivity, dissatisfied customers and more. The cost of a four to eight hour outage could cost you more than the expense of the backup connection, depending on your business.

## Conclusion

Increasing dependence on services, applications and functionality that you access through the Internet is one of the most critical issues that is addressed. With technology evolving continuously so will the dependence. Now is the time to have a reliable, cost-effective backup system with true route diversity. The ideal solution may be 4G/LTE.