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How Power Over Ethernet Plus (PoE+) Provides Scalable Power to Your Ethernet Devices

Business Solutions

The phone in your pocket gives you access to almost the entire collected pool of human knowledge — and yet, it still gets its power from a rudimentary cable. With such groundbreaking technological innovations as we've seen in the past decade, you might find yourself asking, why do so many devices still have wires? The mystery hasn't yet been solved, but for businesses, there is a stepping stone to help reduce the number of cords littering your network — it's called Power over Ethernet (or PoE) technology.

The Power of PoE

The days of hiring costly electricians to run cables are behind you. PoE uses your network's wired Ethernet connection to carry electrical currents to devices such as phones, security cameras, and Wi-Fi access points — passing electricity through their data cables rather than power cords or AC adapters. This is invaluable when you want to reduce the number of wires hanging from a ceiling-mounted access point, or clear the desktop clutter from a VoIP phone. With PoE, you can transfer both power and data with just one cable.

Absent a PoE switch (which works just like a traditional network switch), you can also use a small adapter called a PoE injector, which connects to your power outlet and sends the electric current through a connected data cable to your PoE-capable device. If your devices aren't PoE-ready, you'll need an additional box — known as a "picker" — between the injector and device.

Putting the Plus in PoE+

Similar to Wi-Fi, the Institute of Electrical and Electronics Engineers (IEEE) creates standards for PoE. Regular PoE gear that adheres to the 802.af PoE standard delivers a maximum of 15.4 watts of power. Meanwhile, the 802.3at standard — known as the much catchier "PoE+" — can handle up to 30 watts (W).

Just like standard PoE, PoE+ is compatible with ultra-fast gigabit Ethernet, but the boost in maximum wattage also allows you to add or inject a 30W port to your existing PoE or non-PoE platform. Because it's completely backward compatible with 802.3af, it allows you to add an additional class of power to your current network setup, making it a scalable solution to add future devices to your network without having to wrestle with the cord snakes living in your wiring closet.

When to Power Up

As of 2016, 802.3af is still the standard for PoE, enabling you to:

- Power most wireless access points, regardless of brand.
- Power the majority of Internet Protocol (IP) phones and IP cameras.
- Deliver power to older devices — if it's a powered device with a gigabit Ethernet port, it likely works with 802.3af.

Of course, standards change quickly — that's why choosing PoE+ helps to future-proof your network. Only a few current devices require the level of power offered by PoE+, but that's likely to change. Already, some IP security cameras and IP phones work only with the PoE+ standard, and that's a trend that will continue to grow.
By adapting PoE+, you'll:

- Maintain the functionality of your current PoE devices while gaining the ability to add cutting-edge devices.
- Power devices with higher wattage requirements (up to 30W), including high-end access points that consume more than 15W. This is particularly important if you anticipate deploying 802.11ac access points in the next few years — these advanced APs are power hungry and need the wattage you can only get from PoE+.
- Make these changes without changing the existing infrastructure of your network..

When you choose PoE+, you'll find your network more reliable, flexible, and scalable than ever.
Your Internet might be LAN-powered, but PoE+ gives a whole new meaning to the phrase "wireless network."

To learn more: **http://www.linksys.com/us/for-business/**