

## 5 WAYS TO GET MORE MILEAGE FROM YOUR EXISTING INFRASTRUCTURE

### **#1. Repurpose unused phone wires for Ethernet.**

Campus phone systems are usually built around 25- and 50-pair trunk cable. Most of these wire pairs are redundant and not used as phone lines. These spare pairs can be commandeered for Ethernet through the use of Ethernet extenders, which not only transparently establish a network connection on phone cable, but can also extend links farther than the usual 100-meter limit for Ethernet on copper. Ethernet extenders are an ideal solution for linking isolated workstations without laying new cable.

### **#2. Upgrade to fiber on your existing copper ports.**

Fiber optic cable has many advantages, including speed, distance, and resistance to EMI/RFI, plus it's now usually less expensive to install than the equivalent copper infrastructure. What usually stops the installation of fiber is the prospect of having to replace expensive network switches with fiber switches and having to install fiber NICs in PCs.

Media converters are a simple way to convert the RJ-45 ports on existing equipment to fiber. Because media converters are transparent to data, they're "invisible" to the network—literally plug-and-play. In the data center, modular media converter systems feature powered chassis that house and power multiple media converters—a whole switch's worth of copper ports can be converted to fiber without cluttering the rack. On the desktop side, tiny USB-powered media converters bring fiber to the desktop without the driver issues and incompatibilities created by fiber NICs.

### **#3. Take advantage of PoE without buying new switches.**

Adding power over Ethernet (PoE) devices such as VoIP phones, wireless access points, and security cameras doesn't have to mean an investment in a new PoE switch. PoE injectors enable you to add power to one or more Ethernet runs using your existing copper-based Ethernet switches. Injectors are particularly useful when adding just one or two PoE devices such as security cameras to a network.

### **#4. Accommodate larger equipment in the cabinets you have now.**

Sometimes upgrading servers or switches can lead to a space problem when new, larger equipment restricts cabinet cabling space. These tight squeezes can often be solved by using right-angle patch cables, which can save up to 4" of cabling space over ordinary patch cable, eliminating the expense and difficulty of replacing data cabinets.

### **#5. Bring legacy equipment with serial interfaces into today's network.**

Devices such as machine tools, restaurant equipment, and scientific instrumentation often have a useful life that spans decades. Although newer industrial devices now come equipped with Ethernet, older equipment often has an RS-232, RS-422, or RS-485 serial interface. These serial devices can be brought into the Ethernet network through the use of a device server. Once legacy devices are on Ethernet, they can be accessed from a central location, enabling control, real-time diagnostics, data capture, and alerts.

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