

ZDT EXPERT OPINION WITH **CARRIE HIGBIE**



Time for a data center checkup!

Recent studies have shown that many data centers in use today were designed, engineered and put in use 10-15 years ago. In that period of time we have gone from centralized, to decentralized and back to centralized again. We have gone from mainframes, DOS, green screen applications, to Unix, Linux and PC networks. Also we are adding more real time applications for security, voice, video and even trading. Couple this with the rising cost of power and lack of power supply in many areas, and it becomes glaringly apparent that it is time to for a checkup.

One recent poll conducted by Network World cited that a lack of well managed cabling was the number one concern for data center managers. For compliance-related documentation requirements, this one factor alone could fail a site. But more importantly, you can't push air through an air dam created by cabling. This in turn means that your chillers will have to work overtime, increasing power consumption.

With upgrades imminent to 10 gigabit technologies, now is a good time to take a look at what is under the floor. We have gone from bus and tag, to twinax, coax, category 3, 4, 5, 5e, 6, 7 and now new standards for 6A and 7A are soon to publish. Fiber has gone through similar changes from the old FDDI grade to the new OM3. So it would be nice to be able to support the newer faster applications without the mess. The cost of copper has tripled over the last couple of years with no expectation to decrease, so it makes sense to do fix up your cabling plants sooner rather than later.

Next up is your power systems and cooling systems. Recent legislation in the US may allow companies to more quickly depreciate these systems. The older systems ran at about 80-85% efficiency compared with the newer systems from companies like APC and Liebert running closer to 95-97% efficiency. In some instances, it is less expensive for a company not to realize the final remaining years of depreciation and replace the older less efficient models with the

newer models. Many of the older air handlers were not variable either. Meaning they are either always on or always off. The newer units allow you to control airflow in specific areas of the data center. Areas where less cooling is needed can be throttled down, while areas where more cooling is needed can be cranked up to a higher capacity. Newer PDU's also run more efficiently meaning less heat will be introduced into the environment. With both systems, you can certainly increase capacity with some of the new "spot" options. However adding capacity on one area will not fix over commissioning in others. The net affect will be an increase in expenses rather than a decrease. Your best bet is to determine OVERALL needs for power and cooling.

Next determine what you can do to get to a more "lights out" approach. The less people you have in the data center the better. You don't lose air as people walk in and out, your data can be better protected as no one will be in there to steal hard drives, you don't have to cool for the lights in the data center, and lastly – the fewer humans, the fewer human errors. This is clearly a trend in data centers with the advancements of remote capabilities on equipment and monitoring tools.

While you are on a roll, the next thing to look at is your monitoring systems. You can monitor anything including your cabling plant with intelligent patching, security with the varied systems on the market all the way to your power and cooling with the newer systems that are far superior to the ones even a few short years ago. Network management has been a mature market for some time, however the rest of these systems are increasingly providing benefits. Of course these benefits only exist if you actually take the time to look at the data provided! But for provisioning and capacity planning for all systems, they are certainly worth a look.

Now, and certainly not the most popular, it is time to review and test out your business continuity and disaster recovery plans. The easiest tip here for procedures is to give each one to someone that doesn't do that job and have them follow

each procedure according to instructions. As systems change, so do procedures. When the person that wrote the procedure or is in that same position reviews the procedures, it is very easy to handle things that go wrong. Of course that will do you little good if they are not around when things go wrong.

In short, the perfect time to be looking at these things is NOW. With many budgets soon to be set for the new year – an ounce of prevention is worth a pound of cure!

About the Author

Carrie Higbie has been involved in the computing and networking for 25+ years in executive and consultant roles. She is Siemon's Global Network Applications Manager supporting end-users and active electronics manufacturers. She publishes columns and speaks at industry events globally. Carrie is an expert on TechTarget's SearchNetworking, SearchVoIP, and SearchDataCenters and authors columns for these and SearchCIO and SearchMobile forums and is on the board of advisors. She is on the BOD and fmr. Pres of the BladeSystems Alliance. She participates in IEEE, the Ethernet Alliance and IDC Enterprise Expert Panels. She has one telecommunications patent and one pending.