

July 7, 2008

# Data centers find new efficiency outlets

*Operators strive to cut energy costs, emissions*

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Data centers in Northeast Ohio are trying to shed their reputations as energy hogs.

Several companies in the region have installed new technology to make their data centers more energy efficient as a way to fight rising electricity costs and to reduce carbon emissions.

Some local companies already are seeing benefits. For instance, the Beachwood office of Antares Management Solutions cut its energy bill by about 18%, or \$5,000 per month, while expanding capacity between 2005 and 2007.

Much of the drop can be attributed to new technologies and techniques that the information technology services company is using to power and cool the 480 computer servers lined up in stacks on the Beachwood office's first floor, said John Uhlir, director of enterprise infrastructure and connectivity in the office.

The data center became more efficient after Antares, a unit of insurer Medical Mutual of Ohio, finished remodeling it in 2006. Antares reconfigured the center's air distribution system so cool air takes a more direct route to the servers, and the company upgraded floor tiles near the servers to allow more cool air to pass through them.

Antares and its customers, who own some of the servers in the data center, also have been buying more

efficient servers and maximizing their abilities through "virtualization," which is the process of using software to allow one server to perform the work of many, Mr. Uhlir said.

The company has virtualized about 200, or 41%, of the center's 480 servers, and it aims to virtualize about 200 more by the end of 2008.

The process, which has been growing in popularity, allows both Antares and its customers to save money on electricity, in addition to saving space for Antares.

"Our first recommendation to (customers) is 'Let's virtualize it,'" Mr. Uhlir said.

The savings fit in with Antares' effort to be more environmentally friendly, which became a formal company goal in July 2007.



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Most initiatives it has taken since then, such as efforts to print less paper, turn off lights and use video conferencing rather than traveling for meetings, also help the company's bottom line, said John Columbro, director of enterprise operations and support at the Beachwood office.

"Green is the new black," Mr. Columbro said.

### Feel-good savings

BlueBridge Networks LLC of Cleveland also is benefiting from upgrades performed on its 20,000-square-foot data center over the past year.

The company upgraded its air flow system, replaced elements of its power system and installed machines to regulate use of electricity. Those changes, as well as recent efforts to encourage more customers to consider virtualizing and buying more efficient servers, should lead to savings as well as fewer carbon emissions, said Kevin Goodman, BlueBridge director of business development.

"Not only is it the bottom line, but it's something you're going to feel good about," said Mr. Goodman, who rides a bicycle to work from University Heights three days a week.

About 15% of the servers at the Garfield Heights data center, which is owned by Pittsburgh-based Expedient Communications Inc., are virtualized, and new customers opt for the feature more than half the time, said Bryan Smith, vice president of sales for the center, which opened in January 2007. By contrast, almost none of its servers were virtualized nine months ago.

"It's actually ramped up fairly dramatically," Mr. Smith said.

Companies that have data centers for their own equipment are pushing harder for efficiency as well.

### That's cool

National City Corp. two months ago opened an upgraded data center in Cleveland as part of a \$58 million investment in the West 150<sup>th</sup> Street property, which also was

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expanded by 60,000 square feet, said spokesperson Kelly Wagner Amen.

A new insulated water tower will provide for less-expensive cooling, Ms. Wagner Amen said. The upgrade, along with the center's move to begin virtualizing servers in the fourth quarter of 2007, should lead to substantial savings, though she wouldn't say how much.

"We do expect it to be considerable based on our projections," Ms. Wagner Amen said.

Diversified manufacturer Eaton Corp. has deployed energy-regulating software in the data center at its Cleveland headquarters and now has an official from the facilities department report to the chief information officer to help the CIO make purchases and other decisions related to electricity use, said Chris Loeffler, applications manager for Eaton's data center solutions group in Raleigh, N.C.

Eaton also has been helping other companies become more efficient: The company manufactures data center equipment, ranging from racks that hold servers to power distribution systems, among its many products, Mr. Loeffler said.

Data center equipment related to power management has been selling well, and data industry conferences recently have focused heavily on efficiency, said Mr. Loeffler, who started giving presentations on efficiency to companies with data centers last year as the issue has become more popular.

Mr. Loeffler said the cause got a big push in December 2005, when an engineer from Internet search giant Google Inc. published a report saying the cost of running computers within a few years could overtake the cost of buying them without efficiency gains. ■