MANAGING WASTE

Defragmentation protects performance at the Bergen County Utilities Authority.

At the Bergen County Utilities Authority (BCUA) in New Jersey, Stan Dobrowski is tasked with maintaining the performance of a dozen servers. Dobrowski is a network administrator and has worked with computers for much of his life. With years of experience as his guide, Dobrowski is keenly aware of a discreet nemesis that lurks in all computers —a nemesis that threatens to slow performance or stop it completely, all with little warning. This is disk fragmentation. While subtle at first, fragmentation can become an imposing problem if it not properly dealt with.

Disk fragmentation occurs when a file cannot be written in one contiguous space. Because of the mechanics of Windows file systems, the operating system used by the BCUA, large blocks of free space will not prevent fragmentation. Windows attempts to write files on a "best fit plus a little more" basis using very basic and limited assumptions. In reality, few files grow to the size Windows predicts, which increases the rate of fragmentation. Continuous file activity leads to an exponential growth of disk fragmentation, even if the drive has large amounts of contiguous free space. As fragmentation builds up, data retrieval becomes painstakingly slow as the machine hunts down the parts needed to assemble the complete file. This condition rapidly hinders the system's performance and stability.

These problems are magnified for administrators operating large numbers of servers. For support staff, disk fragmentation can quickly become an arch-nemesis. Service calls increase, productivity decreases and managers begin to wonder at what expense they can afford new machines. The premier tool to combat fragmentation is Diskeeper, the automatic defragmenting solution from Executive Software.

A UNIQUE SOLUTION

The BCUA serves the wastewater needs of approximately 500,000 residents in 46 out the 70 towns in Bergen County and the solid waste disposal needs of approximately one-fourth of Bergen County. The wastewater treatment plant processes more than 30 billion gallons of wastewater per year while the solid waste division manages about 130,000 tons per year. Dobrowski is charged with maintaining more than 100 desktops and 12 servers within the BCUA. In order to keep 400 gigabytes of administrative data reliable, Dobrowski must be sure his systems run at their peak.

Every time data is created, edited and deleted, the vicious cycle of fragmentation begins anew. Eventually a large percentage of the computer's resources are used for the task of retrieving a file. As more and more files are created, edited and disposed of, the computer's resources become ever more taxed. When this happens, it becomes difficult to operate multiple applications and everything slows down.

With that in mind, Dobrowski turned to Executive Software's Diskeeper. Diskeeper is the market-leading automatic defragmenting product. Diskeeper would ensure the BCUA's servers remained reliable and the vital work of the BCUA would not suffer.

"I'm well aware fragmentation is an issue," said Dobrowski. "A while ago I heard about Diskeeper and the fact that it could run automatically and be administered remotely. So I picked up Diskeeper and have been using it ever since."

After evaluating the software, Dobrowski licensed Diskeeper for use on the BCUA's 12 servers. Diskeeper offers a number of features that other defragmenting products simply do not. It is these unique and powerful features that have made Dobrowski a huge fan of Diskeeper.

"Once I ran the analysis that Diskeeper provides, I could see that I was heavily fragmented," said Dobrowski. "Until I did the analysis, I didn't know how bad it was."

"Diskeeper figures out the optimal schedule and it doesn't waste a lot of resources defragging when it doesn't need to. I really can set it and forget it."

— Stan Dobrowski, network administrator, Bergen County Utilities Authority

Michael Materie, Diskeeper product manager for Executive Software, explained what set his company's product apart from its competitors.

"What made Diskeeper different and why it hung around while everyone else fell away was the fact that it is an automatic background defragmenter," explained Materie. "That concept of an automatic background product is highly desired in an environment like BCUA's."

Diskeeper operates without interrupting daily tasks and without affecting productivity. This feature is critical. Anyone who has put all other programs on hold while running lesser defragmenting programs knows how productivity comes to a

standstill. Diskeeper succeeds where others fail because it is an automatic defragmenter. The time saved by automation translates into higher productivity and less expense. It also allows IT professionals like Dobrowski to focus their skills on more demanding tasks.

"The Set It and Forget It® and Smart Scheduling™ features are some of the things I like a lot," Dobrowski said. "Diskeeper figures out the optimal schedule and it doesn't waste a lot of resources defragging when it doesn't need to. I really can set it and forget it."

"We built Diskeeper to be sensitive to what is going on in the system," said Materie. The software uses adaptive technologies like I/O Smart™ and Smart Scheduling™ to learn usage patterns; therefore, Diskeeper automatically runs when it's most needed, without harming computer performance.

"We built the product under the assumption that a system would be in use 24/7," Materie said. "We wanted Diskeeper to work on critical systems to improve performance, not rob the system of its ability to produce."

"In the five years I've used Diskeeper, I've never had a problem, I've never had a single bit of lost data and I've never had a crash." **— Stan Dobrowski,** network administrator, Bergen County Utilities Authority

PRODUCTIVITY WITHOUT COMPROMISE

An employee's productivity is based on motivation and available resources. If the resources available to an employee are substandard, productivity inevitably declines. Diskeeper maintains productivity by efficiently defragmenting computer hard drives without taxing system resources. The product is user-friendly and consolidates free space, which leads to revitalized computer performance.

"Diskeeper has Set It and Forget It® technology built in so it can run anytime. I have it run every night and on the weekends," Dobrowski said. "And with Smart Scheduling™, it automatically knows when the next disk defragmentation should take place."

Regular defragmentation clearly maintains the efficiency of the BCUA's severs and helps Dobrowski feel confident about reliability. "I like to know that my disk and my servers are not working harder than they have to be," he said. "I feel certain this is what happens with Diskeeper running."

The software also reduces demands on the BCUA's busy IT staff, Dobrowski added. "In the five years I've used Diskeeper, I've never had a problem, I've never had a single bit of lost data and I've never had a crash."

Diskeeper not only runs efficiently, it also runs without conflicting with other programs.

"You are always able to access files during defragmentation," Materie said. "There is never a conflict for running anti-virus software or anything like that. They are compatible. It's all integrated. It's all handled. Its all 100 percent safe."

BCUA's vision statement is, "We believe that serving our Bergen County customers with excellence is our most important job … We will maintain our facilities and systems as though they were our own."

Thousands of New Jersey residents depend on Dobrowski and the BCUA. And Dobrowski depends on Diskeeper to protect the performance of technology that's vital to the agency's mission.

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7590 N. Glenoaks Blvd.
Burbank, CA 91504
800.829.6468 ext. 4315
www.executive.com/BCUA

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