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Godfrey & Kahn – Server Virtualization

Godfrey & Kahn is a Midwestern law firm founded in 1957. With headquarters located in Milwaukee, there are various offices in Wisconsin and Washington, DC. Serving a diverse clientele ranging from individuals and small businesses to government and large corporations, it has attorneys working in a wide array of practice areas within litigation and business counseling.

Challenge

After accomplishments in converting to paperless communications, purchasing Energy Star products, and offering transportation subsidies to employees carpooling or utilizing buses, Godfrey & Kahn looked for additional opportunities to save energy and improve their environmental footprint.

The IT Department of Godfrey & Kahn has been looking for opportunities to virtualize their servers for several years. Although there were no problems with their physical servers, they would like to minimize the need of separate monitors and power required by physical servers. Virtualizing servers allows running multiple servers on one single piece of hardware.

Strategy

Learning more about server virtualization through a product demonstration, Godfrey & Kahn's IT Department teamed up with hardware and software vendors to design a solution to virtualize their Data Center. After considering different criteria such as cost, technical support and product availability among various options, the firm finally selected the HP c7000 Blade enclosure and began transitioning their physical servers to a cluster of HP BL460c blades. An enclosure houses several blade servers and centrally supplies all power and interconnections for them. This eliminates the need for separate power supplies and additional connections typical for physical servers. A blade server is a compact version of a rack-mount server. So, compared to a physical rack-mount server, a blade minimizes space and power consumption.

Godfrey & Kahn also installed the VMWare software on all the blades. This allows the creation of multiple virtual servers on each blade. The software also enhances the efficiency of the system by making it easier to control and maintain all servers from one central administration console.

The bulk of the selection and transitioning processes took around 3-5 months. Some configuration changes and optimizations were required during the transition but there were no major problems incurred.

A blade enclosure (above) and a blade (below)

Results

The initial investment for the virtualization was over $300,000 but Godfrey & Kahn has benefited greatly by this project. The principal benefit is that it greatly reduced the energy use in its Data Center. With the virtualization of just 20 servers, VMWare estimates that Godfrey & Kahn can save 132,221 kWh annually

in energy use for the servers and cooling. As of summer 2012, they have 7 blades that run over 40 servers. That is converted to an annual energy savings of around $26,400.Virtualization brings down the long-term maintenance costs because the combined maintenance costs for the blade enclosure and blades are less than that of all the original physical servers. With all these savings taken into account, Godfrey & Kahn expected the payback period to be about 5 years.

The blade enclosure also freed up space originally occupied by the physical servers. It reduces the space taken up by an equivalent of one mount-rack. The server virtualization didn't cause technical issues for the employees. The IT Department even received reports of enhanced performance from users.

Godfrey & Kahn is deploying additional virtual servers and will no longer purchase less efficient physical servers. Their server virtualization experience was so successful, the firm plans to continue this trend by creating virtualization of some desktop computers which will further their savings.

Tom Dressel, IT Director, Godfrey & Kahn: tdressel@gklaw.com