

Aperture Improves the Way Companies Run Data Centers

Analyst: Dianne McAdam

Management Summary

Large computer rooms have a life of their own. New equipment gets added and older equipment gets removed on a regular basis. Existing equipment gets moved from one location to another to make way for the next new server or storage device. Keeping up with the changes can be difficult.

In a former life when I supported large enterprise customers, we had rather interesting ways of keeping track of the equipment in the computer room. One common way was to use yellow sticky notes - one sticky note designated each piece of equipment. These sticky notes were placed on a white board with the outline of the computer room. When equipment was removed, the sticky note was removed. When it was added, a new sticky note was placed on the board. And when it was moved, the sticky note was moved. This white board approach was very simple and very inexpensive. Unfortunately, there were numerous problems with white board images. These images could not be shared easily with others, were not very accurate, and were prone to errors (especially when the sticky glue became old and the notes ending up on the floor). In some cases, we used more sophisticated tools, such as *Excel* spreadsheets and *Visio* diagrams, to track computer room equipment. Keeping *Visio* diagrams up to date was tedious and time consuming. There were few tools then to make easy the job of tracking equipment on the computer room floor.

Maintaining control of devices becomes an even bigger headache today as the number of servers, switches and storage grow yearly, monthly, sometimes even daily. But maintaining control is not enough. Proper planning is required to ensure that the addition of new equipment and new projects are completed on time. Poor planning results in projects that run over budget and are completed late, or even worse, never get finished at all. Planning, managing and controlling changes in the datacenter are of utmost importance to ensure the smooth running of the datacenter today and in the future.

Many enterprises today are faced with datacenter consolidations. Merging one data center into another requires careful and detailed planning. IT personnel need to determine where the new devices will be installed and if there is sufficient power and cooling available. Consolidations must be carefully managed to ensure that all phases of the merger are executed flawlessly. Many data center mergers have been delayed because the right power drops had not been installed in the right locations. **Planning, managing and maintaining accurate control of all physical aspects of the datacenter is critical to ensure that such projects are completed on time.**

We now have software products that will discover devices in our SANs. These products will display a logical view of storage and servers. They define which servers are logically connected to which storage device. However, these products do not define the physical aspects of the device - where it is located, how much power it requires, and how big it is. What we need is a product that can accurately describe all physical aspects of a computer room floor. This product must depict not only where the equipment is located but also all its physical connections. It must be modified - easily - to keep up with changes as they occur and must be part of the change process to ensure that changes can occur on schedule. Aperture Technologies, Inc., of Stamford, CT, has delivered such a product. Read on to find out more about its solution.

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Managing Today's Data Centers

Changes within the computer room require the careful coordination of several different organizations. IT organizations have the responsibility of monitoring Service Level Agreements (SLAs), provisioning servers, network, and storage for new or growing applications, and resolving problems. Facilities organizations are responsible for building maintenance, office and data center floor space, and power and cooling requirements. Adding or moving servers and storage require that the facilities team and the IT team work closely together. Aperture's newest product, VISTA 500, provides a visual depiction of the computer room floor that can be used by both the Facilities and IT team to plan, coordinate, and track all changes.

Aperture VISTA 500

VISTA 500 is a data center planning and management tool which tracks the current power and space utilization within the data center - a tedious task when things remain static. It can be an overwhelming task when things constantly are changing. VISTA 500 also tracks and reports on power trends, an important function with today's rising energy costs.¹ These reports enable facilities and IT to work closely together to determine if equipment is not being cooled properly, which can lead to malfunctions. It allows the teams to view current capacities and look to the future and properly plan when more infrastructure, such as upgrades to electrical and cooling systems, will be required. It also allows the two teams to determine the best location for equipment when consolidating data centers or adding new equipment to support growing applications.

VISTA 500 provides numerous detailed visual maps, including all electrical connections and cabling connections. The physical infrastructure of servers (including blade servers) and storage mounted on racks is pictured in easy to read diagrams. Now, it is easy to add servers and storage to the racks that have sufficient power and cooling resources.

VISTA 500 can also reduce risk when

planning changes with people outside the enterprise. The vendors and contractors responsible for installing new equipment now have an easy tool that helps them plan, change and track their activities with the facilities and IT teams.

VISTA 500 is not just for technical teams. Its benefits extend to management as well. Reports can be produced to produce an audit of all changes - a requirement for regulated companies.

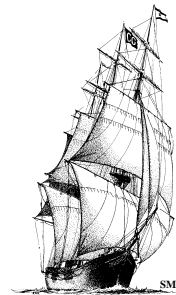
Future Plans

Aperture plans are around having VISTA help organizations look to the future and answer questions around datacenter capacities. Other functionality being investigated includes auditing capabilities to ensure the accuracy of the repository and chargeback functionality so business units can be accurately charged for the resources required to support their systems.

Conclusion

Any changes within the data center require careful planning and coordination to ensure that projects are completed on time and without unexpected outages. VISTA 500 ensures that these changes can occur as planned. This product also tracks energy usage, an area of great concern for many corporations faced with rising energy costs.

Do you need VISTA 500? If you have not added, removed or moved servers and storage in your data center in the last few years then you may not need VISTA 500. **If, however, your data center is constantly changing, then you need to evaluate VISTA 500. It can help manage your IT resources today, plan for the future and ensure your sanity!**



¹ See **The Clipper Group Explorer** dated September 19, 2006, entitled *The Greening of the Data Center*, and available at <http://www.clipper.com/research/TCG2006081.pdf>.

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- ***The Clipper Group can be reached at 781-235-0085 and found on the web at www.clipper.com.***

About the Author

Dianne McAdam is Director of Enterprise Information Assurance for the Clipper Group. She brings over three decades of experience as a data center director, educator, technical programmer, systems engineer, and manager for industry-leading vendors. Dianne has held the position of senior analyst at Data Mobility Group and at Illuminata. Before that, she was a technical presentation specialist at EMC's Executive Briefing Center. At Hitachi Data Systems, she served as performance and capacity planning systems engineer and as a systems engineering manager. She also worked at StorageTek as a virtual tape and disk specialist; at Sun Microsystems, as an enterprise storage specialist; and at several large corporations as technical services directors. Dianne earned a Bachelor's and Master's degree in mathematics from Hofstra University in New York.

- ***Reach Dianne McAdam via e-mail at dianne.mcadam@clipper.com or at 781-235-0085 Ext. 212. (Please dial "212" when you hear the automated attendant.)***

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