The Seven Deadly Sins of Data Center Consolidation – And How to Avoid Them
"The beatings will continue until morale improves."

Unfortunately this is the kind of environment that IT managers must operate in as they move into the third year of a technology-spending squeeze. As a result of cost cutting measures that have already been implemented, it's getting harder and harder to reduce costs in a meaningful way. The easy cuts were made two years ago. The tougher cuts were made last year. So how do you cut costs when you run out of things to cut?

Increasingly for many IT executives the answer is: data center consolidation. It's a technique that service providers and outsourcers have used to their advantage for years because the cost savings can be significant -- on average 10% - 30% -- but only if consolidation is implemented properly.

AFCOM, the premier trade organization providing insights and actionable information for managers of enterprise data centers, finds that its members are consistently reporting there is unrelenting pressure to generate additional value out of their existing investments, despite all the cost cutting efforts of the last several years. In addition, these same organizations report that as a rule, any new expenditure must demonstrate a substantial return on their investment within two business quarters.

Based on research that AFCOM has conducted in recent months it is estimated that the opportunity for cost savings available through consolidation is significant. Recently, AFCOM surveyed a significant portion of its more than 3,000 members and found that 51% operate more than one data center.

In fact, 39% of AFCOM members report that they operate between 2-4 facilities, 5% say they operate between 5-7 facilities, 2% operate 7-10 data centers, and 5% say they operate more than ten facilities.

While the cost savings opportunities available through consolidation appear large, as with any cost saving technique, there are benefits - and there are dangers:

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Organizations that have undertaken successful data center consolidations have managed to avoid the most common pitfalls and have gone on to achieve significant cost savings and efficiency improvements. But for all the successes that exist, there are also many implementations that have been less than successful. These implementations have resulted in cost increases, business disruptions and reduced performance - not a good outcome for something that should be bringing benefit.

To help organizations achieve success, AFCOM has identified the Seven Deadly Sins of Data Center Consolidation that can negatively affect consolidation efforts. By taking advantage of best practices from IT organizations in many different industries, you can avoid The Seven Deadly Sins of Data Center Consolidation.

**THE FIRST DEADLY SIN: REAL MEN DON’T ASK QUESTIONS**

Despite significant progress made over the years to get IT and the Line of Business owners that they support to talk to each other, the first deadly sin is a lack of discussion and dialogue by IT with those who are responsible for the underlying business. IT frequently ignores this as an opportunity to get closer to those who use their services, and as a result, continue to look at things through the prism of technology and not business.

By not having these discussions with the Line of Business owners, IT will fail to understand such important items as:

- Key business drivers
- New developments that may accelerate (or slow-down) consolidation efforts
- Critical business timing factors
- Potential impact on customers
- Ability to utilize consolidation as a means of achieving competitive dominance

**HOW TO AVOID THE FIRST DEADLY SIN**

AFCOM believes that IT organizations must first understand the needs and requirements of the Lines of Business prior to getting a consolidation project moving. By taking this simple step, IT can shape a consolidation plan that matches the needs of the business - and not just technological considerations. In addition, this also provides IT with an opportunity to communicate to the Lines of Business about consolidation efforts; why this makes sense, and the potential impact on the business. By understanding how to best handle the business considerations, IT can configure a consolidation plan that not only addresses cost reductions and efficiencies, but also best supports the Lines of Business.

**THE SECOND DEADLY SIN: PLANNING TO FAIL**

IT organizations frequently plan to fail by failing to plan for data center consolidation efforts, manage to that plan, and then report on progress against it. Too often, IT managers do not create a detailed project plan that takes into account both the technology issues, as well as the underlying business issues (see the First Deadly Sin) and then turning that into a detailed project plan that is used to manage the process. IT organizations also increase their chances of failure by not measuring and reporting on progress against the plan.

**HOW TO AVOID THE SECOND DEADLY SIN**

AFCOM believes that organizations can reduce negative impacts by creating a detailed consolidation plan that is used to manage and report on progress against the goal. This project plan can serve as a catalyst to maintain and improve relationships with Line of Business owners, as well as be used to better manage the entire consolidation process. In addition, the most successful plans also serve to focus resources and attention on understanding all the components of the IT environment.
But reporting on a complex undertaking involving multiple Lines of Business, locations, infrastructures, applications and databases is a daunting task. That’s why IT must report on progress in an easy-to-understand fashion that is business-centric and not technology-centric.

THE THIRD DEADLY SIN: THE COLOMBO SYNDROME

One of television’s most colorful detectives had a famous line: “Oh, and just one more thing.” When undertaking data center consolidations, fragmented systems and repositories can prevent IT managers from understanding exactly what physical and logical assets they have, where they are located and what their disposition is. Too often, IT groups are in the uncomfortable position of learning about affected assets after consolidation plans have already been made and which are in the process of being implemented. In many cases this can significantly disrupt the process and negatively affect schedules and long-term success.

HOW TO AVOID THE THIRD DEADLY SIN

Successful data center consolidations are handled by organizations that know exactly what physical and logical assets they have, where they’re located, whether they are leased or purchased, under maintenance agreements, as well as a myriad of other details. Those who undertake successful consolidations must do the following:

- Identify, locate and manage virtually every technology asset -- from hardware and software, to networks, telecommunications lines and subsystems
- Understand and manage IT asset inventories to avoid unnecessary spending
- Ensure that the right assets are being purchased under the right terms -- and are being deployed to the right people
- Verify and document compliance with software licenses to avoid the liabilities associated with vendor software audits
- Adapt to new technologies and systems so that critical information is shared quickly, easily and seamlessly

Too often this data is fragmented and spread across asset management repositories, spreadsheets, Visio charts and handwritten files that may exist around the organization. AFCOM strongly recommends that IT organizations overcome these limitations by developing as complete an asset picture as possible prior to commencing data center consolidation. While you can never completely eliminate the effects of the Columbo Syndrome, you can certainly minimize it by understanding exactly what you have.

THE FOURTH DEADLY SIN: PERFORMANCE ANXIETY

Not planning for performance and capacity issues in consolidated environments can negatively impact the success of consolidation efforts. If the twin problems of performance and capacity are not adequately modeled and planned, there is a significant likelihood of violating service level agreements (and incurring penalties) or disappointing or alienating Lines of Business. By failing to take these factors into account, IT organizations can also lose their hard-won credibility by reducing costs, but failing to adequately deliver service.

HOW TO AVOID THE FOURTH DEADLY SIN

IT organizations can avoid this pitfall through a number of approaches. First, they must use the asset data and other tools to identify the hidden capacity within the IT infrastructure, such as processing, storage and telecommunications assets. Many AFCOM members report that reduced demand caused by a slowdown in the business cycle means that they have excess capacity, but this capacity is hard to find and unevenly distributed throughout the organization.

Organizations can overcome these limitations by using well-established tools for understanding capacity utilization and application performance, coupled with newer tools for longer term performance and capacity modeling. Most
importantly, IT must be able to continually link IT infrastructure with business performance to ensure that the infrastructure supports the needs of the underlying business.

THE FIFTH DEADLY SIN: DIVIDE - AND BE CONQUERED

Data center consolidation efforts also run into trouble when efforts are marginalized by an approach that fragments staff resources, technologies and purchasing power. Too often, IT organizations must fight against highly diverse installed platforms (hardware, software, networks), a stovepipe approach to skills, and highly fragmented purchasing approaches. Consolidation can eliminate these issues, but they are complicated by the potentially unfriendly organizational impact of consolidation, where Lines of Business and functional organizations feel threatened by planned changes or fear loss of control.

HOW TO AVOID THE FIFTH DEADLY SIN

IT organizations must be able to leverage their overall knowledge of hardware, software, leases, licenses and lines to consolidate the IT infrastructure and leverage purchasing power. While not all systems can or should be consolidated, asset reviews, proper planning and communication with Lines of Business can help you make the right decisions. Most importantly, by leveraging enterprise-wide needs, IT organizations can take advantage of what outsourcers have benefitted from for years: greater purchasing power and vendor leverage.

THE SIXTH DEADLY SIN: MURPHY’S LAW HAS NOT BEEN REPEALED

Murphy’s Law - If anything can go wrong, it will - and at the worst possible time - is an enduring principle that remains in effect for data center consolidations. Murphy has a tendency to be invoked most often for those that fail to plan adequately and measure progress against that plan. Most importantly, those that fail to develop a robust test environment and undertake rigorous testing under production circumstances can expect to meet up with the consequences of Murphy’s Law.

HOW TO AVOID THE SIXTH DEADLY SIN

Successful organizations place great emphasis on the creation of a well thought-out migration plan that defines phases, schedules moves, locks-down system changes and allows for detailed system testing. Both physical and logical issues need to be taken into account including:

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Many organizations find that creating mirrored environments provides one of the best opportunities to develop a stable environment while allowing the original configuration to remain intact. Once this new environment is established, detailed testing can take place that simulates peak demands and loads and provides insight into how well the new environment may handle capacity and performance issues. One of the key elements in this phase is to ensure that when cutover does occur, users don’t notice the change.

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THE SEVENTH DEADLY SIN: DOING THE SAME THING - AND EXPECTING A DIFFERENT RESULT

Organizations that consolidate data centers and then continue to use the same processes and methodologies for data center management are vulnerable to failure. Too often, IT managers who go through the hard work of consolidation squander many of the benefits by using old processes in a new environment, eventually driving up costs and reducing efficiencies.

HOW TO AVOID THE SEVENTH DEADLY SIN

Change management, purchasing, business continuity planning, software licensing and performance and capacity planning are all areas that can benefit from smart process change. And these processes are easier to change during a consolidation (or just after) because of the unfreezing of attitudes that occurs. People know things are different and they’re willing to adjust to a new way of doing things.

In many cases, there are new tools available that allow IT organizations to perform these functions in a fundamentally new way so that instead of obtaining up-to-date information only when consolidations are contemplated, the information is available in real-time every day. By keeping on top of these processes on an ongoing basis, IT managers can ensure they are receiving maximum return on their infrastructure investments.

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CONCLUSION

Data center consolidation can be a powerful tool to reduce complexity, enhance efficiency and derive maximum value from your IT infrastructure. But achieving these benefits can be easier if you take prudent steps to avoid the Seven Deadly Sins.
About Aperture

Aperture is the leading provider of enterprise software solutions that enable organizations worldwide to manage the physical infrastructure of their data centers. Aperture solutions automate and facilitate standardized best practice processes to manage the complexity and ever-changing conditions in today’s enterprise data centers and to deliver world-class performance in IT operations. With Aperture, organizations worldwide have reduced operational risks, increased efficiency and generated actionable information to make better business decisions.

Aperture’s flagship product, Aperture VISTA®, is an enterprise software solution which reduces operational risk and improves efficiency through the visual management of the data center. Aperture VISTA® delivers the key processes that enable organizations to take control of an increasingly complex physical environment including equipment, space, power, cooling, network and storage. The world’s largest companies use Aperture VISTA® to achieve substantial improvements in the quality, reliability and cost effectiveness of their infrastructure planning, design, provisioning, troubleshooting and analysis.