

Top Five Mistakes in Consolidating and Virtualizing the Data Center

As data center demand continues to increase, the number of underutilized systems continues to grow, resulting in extremely large, complex, and costly infrastructure and high capital expenditures (CapEx) and operating expenses (OpEx). Additionally, costs associated with power, cooling, and space increase as infrastructure grows. However, the proper use of appropriate virtualization and consolidation technologies can reduce OpEx over time

Top Five Mistakes

To reduce the high cost and inefficiency of their data centers, many IT departments turn to data center consolidation and virtualization. These strategies help organizations use and manage their physical infrastructure, limit expensive equipment purchases, and reduce the expenses for space, power, and cooling. Companies must be careful, however, to avoid the following common mistakes associated with these important data center strategies:

- **Mistake 1:** Minimizing total capital expenditures rather than considering total financial impact. A new platform may require an initial capital investment to produce greater financial benefits.
- **Mistake 2:** Making smart infrastructure decisions but not preparing your IT department for change. IT executives should look beyond the infrastructure itself and identify the cultural and procedural barriers to change.
- **Mistake 3:** Deploying a platform to satisfy your needs but not laying a foundation for future flexibility. Responding to change is essential to remaining competitive.
- **Mistake 4:** Designing the data center for applications but including site planning and space considerations only as afterthoughts. The cost of supporting business growth and expansion should be a critical factor in assessing total financial impact.
- **Mistake 5:** Choosing products with compelling features but overlooking the complete partner ecosystem. Work with partners who have pre-integrated components that can save you time and reduce deployment risk.

1. Underestimating Total Financial Impact

Traditional capital cost analysis can give you misleading results because it focuses primarily on the cost of procuring solutions without considering the impact on operating expenses, IT productivity, and the capability to spend more time on IT innovation. Assessing the total financial impact includes costs such as the time required to manage heterogeneous environments and the savings from elimination of redundant infrastructures, benefits such as the capability to respond more quickly to future requests, and risk factors such as business disruption and application compatibility. Do not make the mistake of relying on an analysis that is limited to initial costs and misses the total effect on the business.

2. Neglecting to Prepare the IT Department for Change

Consolidation of network, storage, and computing resources into a single platform, along with consolidation of storage and IP traffic onto a single network, can greatly simplify the operation and management of the data center. The success of this strategy, however, also depends on complementary changes in processes and staffing. Traditionally, the data center organizational structure has reflected the characteristics of the data center infrastructure: highly specialized staffing groups operating independently and consumed with tedious provisioning and maintenance tasks. Introduction of a more unified data center infrastructure provides an opportunity to streamline and redesign the organizational structure. The full potential of a unified

platform can be achieved when unnecessary processes are eliminated, policy-based automation is applied, and staff members are reallocated to value-added development work and recognized for their ability to work more collaboratively.

3. Undervaluing the Foundation for Future Flexibility

Business requirements change rapidly and are subject to competitive pressures and budget constraints. Infrastructure that is complex, difficult, and time consuming to change will not serve your business well in the future. You may not be able to predict what you will need in the future, but you can choose an architecture that allows you to quickly build infrastructure to specifications on demand and easily reuse the components in new ways when they become available again. Software-based management that is automated according to predetermined policies is a giant leap forward and provides a cost-effective way for IT to deliver competitive advantage for the business. A unified infrastructure is the foundation for meeting the demands of users and customers, dramatically accelerating delivery of new applications and services, increasing the consistency and reliability of those services, and providing transparent recovery in the event of a disaster.

4. Delaying Site Planning and Space Considerations

In many organizations, the cost of acquiring and maintaining facilities is significant, but it may not be considered early enough in the data center planning process. Architecture discussions naturally focus on business applications, users, workloads, and security requirements and can quickly lead to system requirements that are relayed to vendors. Site planning and space considerations may not be considered until a platform decision has already been made and sizing is being determined. This delay can be a costly oversight if business growth requires major data center expansion, because the underlying architecture and its capacity to scale can have a dramatic effect on future data center costs. Mergers and acquisitions, large numbers of new users or devices, or the demand for new applications can accelerate data center growth in unexpected ways. The best approach is to include the potential costs of expansion in your initial analysis and focus on building an elastic data center that can be scaled up or down with little additional investment.

5. Overlooking the Partner Ecosystem

Some organizations choose a vendor based on the features of a single product and subsequently learn that the cost of integrating that product into their environments outweighs the benefits they had hoped to achieve. Some proprietary products do not support open APIs and cannot be easily integrated with other products, compromising the quality of the overall solution.

Choosing a vendor that has strategic relationships with other important solution providers is important for the success of your IT strategy. Look at the vendor's partner ecosystem and integration capabilities along with the vendor's end-to-end support for the solution. Can the vendor provide tested and validated solutions with critical partners? Can the vendor they provide advanced integration services and technical support?

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