

PROCESSOR.

Six Quick Tips

General Information

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Perfect Your Data Center Planning

Few tasks rival the complexity of data center planning, and managers charged with undertaking this duty can quickly become overwhelmed with the sheer number of requirements involved to build the perfect beast. The following tips can ease that burden with guidelines for developing a strategic plan for creating flexible, dynamic data centers that can sufficiently support the needs of any SME.

■ Borrow From The Big Boys

According to Nestor G. Cruz, general manager of Achievo's (www.achievo.com) North America Business Group, small and midsized enterprises can benefit from the experiences of larger data centers by assimilating successful tactics used in those spaces. In fact, he says that scaling down a plan originally intended for a large data center is a perfectly feasible strategy.

"This would provide immediate actionable items from the plan, assuming there is an understanding of the process around developing the plan," Cruz says. "But finding a plan is often problematic. There are books available, and there are outlines floating around in the industry that you can get from friends. Sometimes somebody in a large corporation develops a plan that somehow gets out and becomes available. But that is hit or miss."

The alternative, he says, is to hire a consulting intermediary with experience in data center planning. For example, some consulting companies are composed of retired experts who are still willing to deliver effective information. But Cruz warns that SMEs should not depend entirely on consultants to plan their data centers.

"It's important that you take a stab at it first. You don't want to learn with a consultant. You want to learn as much as you can then work with the consultant to refine it further," he says.

■ Plan For The Unexpected

Regardless of an enterprise's efforts to cover all possible steps in its plans, it must expect—and plan for—the unexpected, says Robert J. Offley, owner, president, and CEO of CentriLogic (www.centrilogic.com). "Is there a kitchen or bathroom above the data center? Even if it's not directly above, you have to think of how you will handle water leaks from a bathroom, a kitchen, or the roof," Offley says.

UPS systems occasionally need to be shut down for maintenance, but managers have to

determine what will happen if those systems actually die, he explains. Companies must also plan for what they'd do in case of a fire because, Offley notes, even servers can create electrical fires.

"Can [the center] be burglarized? What if a sewage company starts digging in front of your building and cuts your network off? What if there is an earthquake—do you have your equipment bolted down? Will it survive a good jolt? Will the power remain intact? Will the water pipe burst? These are just a sample of the various questions that can, and should, be considered when developing plans for a data center," he says.

■ Put The Project In The Plan

Common sense would suggest that the creation of most data centers occurs with an actual completed plan in hand. But that's not always the case, says Mark Mahre, vice president of process management at Optimus Solutions (www.optimussolutions.com). He says that, surprisingly, most plans are halfway completed, but it's imperative to have a detailed project plan that details all the steps taken between Point A and Point B and from multiple points.

"In that plan, you're going to cover several major areas," Mahre says. "One of the most important [areas] is a contingency plan. If something happens that you didn't expect, you don't have to bail or be down, but you have something in place that you can continue business as usual. What Optimus tends to look at is something like swing gear [that is, rentals] or having hot spares ready to go if something should happen to that pallet, truck, or equipment."

When creating a data center project plan, Mahre explains that three key components must be included. The first is people: "Businesses need to ask, 'Where are your people located? What are their roles and responsibilities? What are they doing for the data center moves?'" Another key component is process, which Mahre notes is as valuable as the blueprints that detail the building of a new house. That process must be mapped from end to end, be detailed, and be reviewed by everyone involved.

Finally, the project plan must include information on the technology that's moving into the data center, including the data itself and the hardware. "Data needs to be handled in a very systematic way, and you also need to have some testing completed before actually transferring the data. In addition, businesses should ask, 'Do we want to move like-for-like? Or if we are going to move anyway, do we want to do some upgrading and increase our ping, pipe, and power?'" he says.

■ Smart Staffing

Enterprises can reduce overhead by opting for a fully managed data center instead of hiring their own staff to be onsite, says Epiq Systems' (www.epiqsystems.com) Henry Denis, director of IT for eDiscovery. He notes that certain colocation facilities provide gyms, showers, and changing rooms to accommodate a 24/7 staffing system.

"In addition, ensure there are reasonably priced hotel rooms nearby," Denis says. "Data migration normally happens at night so as to not disturb normal business operations, and you'll want to provide those responsible for the migration a place close by to sleep."

He also suggests that in the case of migrations, key management teams should have access to the full documentation of the enterprise's cabling plant and server layout. Further, a flexible cable/asset management software tool will help managers facilitate the planning. ■

by Christian Perry

BEST RETURN ON INVESTMENT: Plan For Air Exchange

Because heat will be prevalent in any new data center, it's crucial for an enterprise to identify the infrastructure support for air in and air out, says Geoff Lyon, CEO for CoolIT Systems (www.coolitsystems.com). He points to the rule of thumb that says for every 10 degrees Celsius the temperature is reduced, the effective useful life of equipment is doubled.

“Regardless of what thermal strategy is used, the heat will eventually need to get out of the building—unless diverted to supply heat to the building in cold months—so when the hot air goes out, return air will need to come in,” he says.

Liquid cooling can prove particularly helpful, he says, because it can efficiently transport the heat to the location that is easiest to deposit with no detrimental effects. Properly planning the air exchange will help to ease future implementation of liquid cooling.

BEST WISDOM: Use The Best Staff Start To Finish

According to Optimus Solutions' (www.optimussolutions.com) Mark Mahre, enterprises need not only a very solid project plan, but they also need to treat the move like a project. This requires both smart employees to plan the move and smart employees to execute it.

“Most times, what businesses do is have their smartest people plan the data move and then they put the low-end guys to execute it—and that's when you have problems,” Mahre says. “We recommend that even though your top guys are involved in larger or high-initiative projects, they need to be taken off those assignments and available for this move.”

BONUS TIPS

Create an e-building. Smart Building Solutions (www.smartbuildingsolutions.com), which specializes in designing, building, and managing data centers, advocates the creation of “e-buildings,” which the company says will “attract and motivate employees, foster teamwork, enhance productivity and communication,” and project a strong external image. These buildings rely heavily on flexibility through the use of raised access flooring, plug-and-play wiring, under-floor HVAC systems, and advanced power systems.

Be safe, not sorry. CentriLogic’s (www.centrilogic.com) Robert J. Offley says that mission-critical data centers must include both resiliency and redundancy to protect their data. “If building this yourself is not feasible, you should house your data in [an outsourced] data center that is equipped with redundant UPSes, redundant HVAC, and redundant network equipment. If you choose this option, the only thing you have to make redundant is your equipment, and even this can be usually leased from the data center provider,” Offley says.