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WHITE PAPER

Data Center Consolidation Benefits & Best Practices

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Introduction

Whether you've been handed a mandate to consolidate your data centers, like many federal government data center managers, or you're evaluating consolidation as an option for aging or expensive in-house data centers, the process can deliver cost savings and higher efficiency without losing the uptime and power provided by your existing infrastructure.

What most data center managers worry about—and rightly so—as they face a consolidation mandate is uptime and cost for cloud or colocation infrastructure. The employee reaction to consolidation news is also worrisome, as inevitably some jobs will be cut.

What they may not realize is that if the data center shutdown isn't smooth and the replacement services aren't carefully evaluated and set up, the transfer process might eliminate any consolidation ROI. This white paper looks at some best practices that will maximize the benefit of data center consolidation. But first...

Why Consolidate or Shut Down a Data Center?

For larger organizations like the feds, data center sprawl can sneak up. Suddenly there are far more facilities than necessary to run the necessary applications, storage, and backup. Older technologies may be at capacity, but with virtualization and greater utilization of newer tech, companies can meet their IT needs with less equipment or even no data center at all, when they choose a colo or cloud partner.

The main reasons to eliminate data centers and/or choose a service provider are:

Consolidation Cost Savings

The federal consolidation mandate is forcing inefficient government IT agencies to reorganize their infrastructure, but private companies can experience similar savings.

Two years into the project, they found

\$63 million

in operational expense savings from data center consolidation.

- High operational costs from energy use, old hardware, redundant personnel
- Upgrading hardware or facilities require significant upfront capital
- Energy efficiency and sustainability: as Greenpeace shines the light on inefficient data centers and the EPA challenges federal data centers to get more efficient, private companies are looking to green operations
- Moving to virtualized or higher utilization of equipment
- Gaining the reliability, redundancy, connectivity that you can't get in-house
- Most providers offer 99.99% availability and guaranteed SLAs

An example of cost savings comes from the federal consolidation mandate, which reported \$63 million in savings through the end of the 2013 fiscal year (two years into the project). The Defense Department has also projected \$575 million in savings through 2014.

Selecting a Service Provider for Replacement Data Center Services

When consolidating data centers, the immediate question is, “Where do these data and applications go?” The two primary choices are other in-house data centers or going all in on a service provider. A service provider can offer additional energy efficiency gains as they have carefully tuned their environment to maximize savings. Using managed services can also reduce your OpEx, though current employees won’t be happy about it. You’ll have to choose between the opportunity to further reduce costs and maintaining morale.

However, the choice between in-house and MSP isn’t so clear cut. With hybrid deployments, your current servers can connect to cloud and vice versa. Same with colocation. Any combination can be set up for a successful, highly available infrastructure. Use in-house and put disaster

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recovery in the cloud; use a private cloud and expand to public for testing or seasonal requirements; etc.

Primary considerations when evaluating a provider are:

- Location – many data centers are in the center of country, which begs the question of, “How far can you be from your data?” Bandwidth and latency can come into play here, as well as the possibility of natural disasters
- Cloud, colocation, or hybrid?
- Access, availability, and uptime
- Efficiency and service levels—what is included?

Data Center Migration and Consolidation Challenges

According to Gartner, the biggest issue in a consolidation project is politics. Employees worry about losing their jobs. Groups squabble over whose application is better suited for business goals. The value of hardware is debated.

These political obstacles are only part of the challenge. Once you start the consolidation process, you may be overwhelmed with tiny details. Best practices for consolidation and migration are:

Staff communication and management

Some staff will have to relocate and some may be laid off. The rationale for consolidation and the migration plan must be effectively

communicated. Staff should be consulted and teams set up to manage pieces of migration. Early and frequent communication helps keep morale up and confusion at a minimum. Measuring power use. Measure current energy use to discover which facilities are the most inefficient and should be shut down. This also helps quantify cost savings.

Managing app sprawl

Different data centers may be running different software versions, applications that fill the same need but come from different vendors, or other sprawl. You must rationalize and consolidate applications as well as hardware. Work with departments across your company to discover their needs and try to create a streamlined app portfolio. This will also help use fewer resources after the move.

Physical site details

As you leave the site behind, you'll have to decide whether to keep the building, lease it, or sell it. If it will still be occupied, you'll need HVAC, fire suppression, and power in place, otherwise these systems can be decommissioned or set to bare minimums to avoid building damage. If leaving the building,

some pieces may be valuable like copper cabling. Insurance policies should be evaluated in case they can transfer or need cancellation. Notify local services like fire departments and mail delivery and cancel regular shipments. Legacy equipment. Decide what can be sold or kept, if you are moving to another in-house data center or collocating equipment. Storage equipment like tapes and drives need to be erased or destroyed.

Software licenses and service contracts

Some licenses can be transferred to a new environment. Others will need cancellation. Service providers, like backup or DR, will need to be notified of your new location.

More and more data center managers are being faced with data center consolidation mandates from the C-suite. Others are just realized the extent of their data center sprawl. Consolidation is inevitably a large project and unanticipated problems will arise, but significant cost savings and operational efficiencies await data center managers who properly plan and keep solid records.

About Green House Data - Green House Data is a cloud hosting, colocation, and managed IT services provider with highly energy efficient, green data centers located across the country. The company is a certified VMware provider, SSAE 16 Type II and HIPAA compliant, as well as a B-Corp and EPA Green Power Partner.

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