A Cloud of Your Own:

Increase Profits by Improving Data Center Efficiency

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You've done everything right. You've carefully looked at your account base and found those customers who would be most likely to migrate to cloud services. You've done your homework and found just the right cloud services from the right providers, and you've signed up for their programs.

- By brokering those services, you've tested your market without any risk.
- By white-labeling those services, you've sold your customers the value under your own brand.
- By signing up dozens of customers, you've proven to yourself that certain cloud services are worth investing in.

Now, you're ready to build your own cloud services to increase your profitability on the sales you've already made, and start creating new, highly profitable sales. Well done.

Perhaps you reached this stage some time ago, have already built your first cloud system and learned a great deal from the experience. It's time to upgrade and improve your solutions.

Cloud challenges — Building & operating your own cloud data center

As with any major IT project, there are challenges you'll need to overcome. The purpose of this whitepaper is to address those challenges — and the most effective ways to overcome them and accelerate building your new infrastructure so you can speed your time to market with your own new service offerings. Then, you can shift your existing business smoothly onto your own cloud system to increase profitability, and start adding new customers.

If you already have a cloud infrastructure in place, we'll also share some of the data center best practices we've seen cloud providers implement to create greater efficiencies and thereby increase customer service levels and profitability.

Challenge #1: Cloud infrastructure design

Not every IT service provider has a practice in network or systems design. If you do, you're one step ahead. If not, you'll want to find someone you can trust to help you realize your cloud vision.

This may be a colleague you've known for years or another service provider you're familiar with. Whomever you select, be sure to take the time to vet that candidate fully to ensure he or she has the skills and track record of success in building sophisticated systems.
You may find yourself turning to a manufacturer for the guidance you seek. Many manufacturers have excellent design teams who can help. Keep in mind, however, that you may be sacrificing "best of breed" in some areas as the manufacturer will always recommend its own equipment and software.

In choosing an infrastructure design partner, remember you will need to maintain and improve your cloud infrastructure for years to come. Depending on an individual designer to be the only person with deep familiarity in the design of your network will not likely be your best strategy. Instead, look for a partner with a large team of designers and support specialists who document their work thoroughly and use time-tested standard methodologies.

Challenge #2: Platform and product selection

While on the subject of "best of breed," keep that standard in mind when selecting the platform and products that go into your data center for two reason:

1) Unlike many end customers you serve, you know the difference between a low initial price, which usually results in high support costs, and a low Total Cost of Ownership (TCO). Investing a bit more in a mainstream product will almost always pay off over the full lifecycle of the equipment involved.

2) Anticipate that some of your customers may want to tour your facilities, and your sales team will benefit from being able to talk about the high-end, top-quality infrastructure you've built. Choose equipment you'd be proud to sell and support if you were still in that business.

One of the hidden challenges in platform and product selection is that you must invest significant time interviewing each manufacturer you're considering, and gathering the information you need to make the best selections. Once you've made your decision, you will consult with each of the manufacturers you choose for guidance and assistance in configuring their products. Each will have its own standards and methodologies.

Not only do you want to be certain you'll have the right equipment, but you also need to ensure the various components will integrate well and that you have the right support available when you need it.

Challenge #3: How to handle hardware acquisitions

Where you obtain the hardware and software products required to build your infrastructure may also play a role in providing the integration insight and support you'll need.

Choosing a large national provider to source products from can result in greater objectivity. Since large providers carry multiple lines of servers, storage, switches, routers and other infrastructure equipment — and a broad catalog of operating system and other software — they will not likely prefer one brand over another for any reason other than finding the ideal fit for you.

Select a provider whose own technical pre-sales staff is large, with a wide array of skill sets and expertise you can take advantage of as you develop your data center solution. While you're at it, vet the company's post-sales technical support team as well. It may provide another line of defense in building your own self-support strategy.

Challenge #4: Completing your solution

Remember, you are building your cloud data center to deliver your cloud service, not all cloud services. Your customers will still need data, network and endpoint security, data backup, network access control, anti-virus, anti-malware, productivity suites, communications and many other cloud solutions you'll want them to source all from you.

The ongoing challenge: Operating your cloud data center profitably

As any service provider who already owns its cloud data center will tell you, building your cloud infrastructure is only the beginning of the challenges. Operating profitability is the ongoing challenge.

Of course, one side of the profit equation is driving more sales and producing more revenue.

You now have a very interesting advantage over product resellers. For them, costs are fixed: the cost of goods, shipping and handling, internal overhead and more. But that's no longer true for you now that you're a cloud service provider: You have better control over your costs.

There are only two ways to increase profits: Boost sales and reduce costs. The costs you incur in your cloud data center are much more within your control. Ways you can increase your profit by creating greater efficiencies include:

Power consumption
Your ability to reduce consumption of electrical power starts at the time you select your servers, storage, switches and other on-premise equipment. Taking the time to choose the most power-effective equipment as part of your selection criteria pays off in reduction of a major ongoing cost.

Integrating power conditioning and power management solutions into your infrastructure increases your ability to impact your overall cost. It also provides another level of assurance of business continuity, a major consideration for an operating cloud data center.

Cooling
Avoid taking shortcuts when it comes to Heating, Ventilation and Air Conditioning (HVAC) for your data center. The more thermostatic control, the better. Your infrastructure equipment operates best when it is kept at a specific temperature. It is absolutely worth the time to work with experts to calculate the optimum cooling power required to keep everything at that temperature, not below it. Every degree colder costs you needlessly.

Security

The biggest cost you face is that of losing your customers' confidence and trust. Just look at the news reports of data centers that have suffered major breaches in the past several years. Data was by no means the only thing they lost. All lost money, all lost the respect of their customers, and many lost their businesses. A secure data center is a requirement of being in the cloud business.

Automation

The more you can automate, the fewer people you will need to operate your data center, and personnel is a major cost center.

Beyond that, however, automation can also reduce other costs.

In a virtualized server farm, for example, automation can determine the optimal location for every Virtual Machine (VM) based on available resources. When user requirements are low, your data center automation solution can identify opportunities to remove all workloads from several servers and transfer them to other, more populated machines. Once the workload VMs have been moved off, they can also automatically power down the systems that no longer have any VMs running on them.

The larger your data center is, the more you can save by allowing automation to find the cost-cutting opportunities.

Improved monitoring and management

It's been said that "you cannot manage what you cannot measure," so having the right tools to constantly monitor your data center operations and environmental conditions will give you the best opportunity to control and reduce your operating costs.

Scalability through partnering

Sometimes your greatest success can become your greatest challenge. You land an enormous contract for cloud services that go way beyond what your infrastructure can handle. The temptation will be to order up new equipment to increase your capacities. Resist that temptation.

The worst case would be that you gear up your data center by adding new capacity and, within a short period, the customer suffers a setback and needs to pull out. Now you have plenty of excess capacity that continues to cost you until you can find enough customers to replace your lost big one.

Instead, identify another cloud provider you feel comfortable partnering with and use its cloud infrastructure to complement your own. You can readily create a contiguous environment between your resources and theirs and manage that without having to make new large infrastructure investments. Just because you sell cloud services now doesn't mean you can't benefit from them too.

Insight

Insight is your "one-stop shop" for help designing, developing, equipping and building your cloud infrastructure, and then providing the ongoing multivendor support you need. We offer access to more than $3 billion in inventory from our robust partner network of more than 5,000 hardware and software manufacturers and publishers. Add to that more than 1,200 consulting and IT services professionals — and more than 2,500 individual, industry and product certifications.

Combine all of that with our deep data center expertise and IT lifecycle services, and your cloud data center deployment becomes a lot simpler.

For service providers like you, Insight services include:

Integration services
Our state-of-the-art ISO 9001:2008-certified custom configuration lab formats 2,000 client systems per day. And our world-class integration teams offer multivendor capabilities and experience to support real-world, heterogeneous solutions.

Multisite deployment
Large-scale systems deployment? Centralized command center? Limited deployment window? Insight's IT implementation specialists have delivered solutions to thousands of clients in countless installation scenarios.

Project management
Our Project Management Professional (PMP)®-certified project managers bring proven methodologies and a wealth of installation and IT systems implementation experience to your site. Your server, storage, network and/or software technologies go in, power up and begin producing — on time and on budget.

Hot swap
Our Hot Swap/Spare Program keeps identical equipment on call, and our Service Tracking and Reporting System (STARS) tracks inventory and dispatches equipment for rapid replacement when you need IT support service, maintenance or repairs.

Infrastructure engineering
We configure your server, storage, network and virtualization solutions with a detailed, low-level design that streamlines installation — reducing transition time and costs with minimal impact to business.

Congratulations on reaching the next milestone in the growth of your business. Let Insight be your single-source partner as you build and operate a cloud of your own.

Contact us today.
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