

Delivering Energy Efficiency In Our Strategic Outsourcing Data Centers

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Jen:

Welcome to this IBM podcast series focused on how to optimize your technology infrastructure. I'm Jen Connect from IBM. During this series we cover topics that help lower IT complexity and improve operating efficiency and provide tips and advice on using technology and services to help you and your company succeed.

Today I'm joined by Joe Dzaluk, IBM VP and resident expert on IBM's implementation of Green in our Strategic Outsourcing datacenters. Joe will speak with us today about lessons learned from IBM's energy efficiency efforts and how they can help you. Please join us as we discuss this timely topic.

Joe, we've heard a lot about energy efficiency and Green datacenters on a global basis. Are these terms relevant when a client is making a hosting decision?

Joe:

First of all, Jen thank you for the opportunity to talk today about energy efficiency and our efforts. To answer your question; yes, they are very relevant. Today we see three major customer trends in the marketplace.

The first trend is datacenter energy efficiency and how it relates to being a global issue. Planets around the world, both large and small, are impacted by the rising use and cost of energy. At IBM our datacenters account for only 6% of our total space but 35% of our total energy costs. As energy use and the cost continue to rise, energy efficiency is going to become a key operational metric for all of us to measure, manage, and reduce.

The second major customer trend that we see is an increase in clients interested in third-party solutions because of energy constraints. Clients continue to indicate power and cooling issues as their #1 or 2 constraints within their existing datacenters. We are seeing an increase in the number of clients on a global basis who are looking to outsource to us as a long-term solution to address their energy challenges.

Lastly, the third trend we see is that clients are evaluating service providers for their greenness in their decision process. In the past year, we've seen several major clients in their RFPs request for prices to IBM include questions about our green strategy and our green datacenters. Your key clients ask us if we are going to comply with the new European code of conduct, which is voluntary, for our green datacenters. Finally, in Asia Pacific, recent consultant surveys indicate that over one third of our clients will be making hosting decisions based upon a provider's green credentials.

Jen:

Joe, what effect has the world's financial situation had on green IT and how, specifically, can IBM's strategic outsourcing help clients with green datacenter solutions?

Joe:

That's a great question. Companies today are re-evaluating in light of the capital market's major investments in datacenters and they're focusing on tactical improvements to make datacenters more efficient. In addition, they've increased their interest in outsourcing where the services provider will assume more of the risk for datacenter growth or decline and obviously the investment in capital.

In May of 2007, we announced Project Big Green and we indicated at that time that we were going to double our IT capacity of our existing customers by 2010; at the same time we would be doubling our size, we'd use the same amount of energy. There are four key pillars of that strategy that we are using to help our clients become more energy efficient.

The first key point is new green datacenters. Last June we opened a 72,000 square foot upgrade to our vaulted datacenter. That 70,000 upgrade allowed us to increase the total size of the datacenter to about 300,000 total square feet making that our largest and our greenest datacenter in the world for IBM. In July of this past year we announced our new leadership datacenter in Rowley. These new green centers along with other centers in France, Japan and in Australia will allow us to become more energy efficient and implement best practices using such things as free cooling which will allow us to make some significant reductions in our energy usage.

The second key pillar is virtualization and virtualizing our servers in our server storage infrastructure. One of the best ways to reduce energy usage is to optimize our IT resources with server and storage virtualization. We have helped major clients around the world implement aggressive virtualization on all of our platforms, whether it's on the x86, UNIX or Mainframe servers. We now have over 50,000 virtual images around the world extending the business value of virtualization. It's going beyond hardware utilization; we're using it across the board and across the enterprise as we manage our datacenters and we're using it to position us for Cloud Computing.

Jen, the third key pillar of our Big Green strategy is implementing new cooling technologies. As clients replace their old IT equipment, it's an excellent opportunity for us to help make the datacenter more efficient. An example of this new energy efficient cooling technology would be the Rear Door Heat Exchanger that we've introduced which, by the way, recently won the Chill-off Competition (believe it or not) sponsored by the Lawrence Berkley National Labs. This was one of the most efficient technologies introduced at that competition. It was developed by IBM Server Group and it uses air side economizers and achieves tremendous power savings.

Power density on new servers is higher than all the technology—either 2 or 2.5 times more. We need to encourage our clients to adopt new cooling technology. In addition to that, we'll also encourage our clients to recycle older equipment as part of our IBM Global Asset Recovery

Solution where today less than 1% of our IT assets end up in landfills and the other 99% get re-utilized.

The last pillar of our Green Strategy is to actively manage and monitor energy use. All of IBM's new servers come with a technology called "Active Energy Manager" which allows a client, or if IBM is managing it, to monitor energy consumption and set energy policies that will optimize application needs and energy costs. It sounds basic but was something that just wasn't being done. All of our new datacenters in addition to having Active Energy Manager will allow us to introduce other features that will allow us to have smart dynamic infrastructures integrated within the IT systems. In real time we can manage delivery of cooling between racks and between CPUs.

Jen:

Joe, can you talk to us about some of the benefits to working with IBM's Strategic Outsourcing Organization?

Joe:

Jen, our Global Team either owns or manages over eight million square feet of datacenter space. This provides significant economies of scale unparalleled in the IT industry and has given us a sound foundation to manage datacenters. There are three examples I'd like to talk about re how we can leverage this with our clients.

First, we have decades of experience to achieve faster results. In the past we've been working to consolidate and virtualize our datacenters on a global basis. This includes datacenters, servers, storage, and network applications end-to-end. We consult with our clients to achieve faster results based upon our lessons learned. That's point #1.

Point #2 is an integrated approach to achieve these synergies. Systems like to be balanced so improving one area such as server virtualization, won't impact your Software Service Management. We integrate hardware and software planning to make sure we can achieve these synergies and keep the system performance optimized.

Lastly, the 3rd point is that we leverage IBM innovation and this is a key point. We have unique insights into IT technology based upon our linkages with the hardware, software and service development teams within IBM. This allows us to be the test site for new innovation before it hits the mainstream commercial marketplace. Right now we're currently getting out datacenter's Cloud ready; that is, ready for them to get hotter with denser equipment that can shut itself off or shut itself down when it's not in use. If 90% of these services facilities shut down, your infrastructure could sense that and reduce the power and cooling delivered correspondingly without human intervention. A good example of how this is done is through sensors or through IBM Mobile Measurement Technology (MMT). The Research Group founded this technology about a year ago and now it's a requirement for all of our datacenters. We continue to invest in innovation and in technologies and tools to allow us to deliver that value to the marketplace.

Jen:

That's great. Thanks Joe. If our listeners want to find out more about how to get started, where do we have to go?

Joe:

Jen, I recommend they go to www.ibm.com/services/us/gts/outsourcing to get more information about what we're doing to make this a smarter planet.

Jen:

That's wonderful. Joe thanks so much for your time today and that concludes our podcast.

Joe:

Thank you.