

The background of the page is a complex, abstract geometric pattern composed of various shades of blue. The pattern consists of numerous overlapping cubes and triangles, some of which are rendered in a 3D perspective, creating a sense of depth and movement. The overall effect is a modern, digital aesthetic.

How Much Cloud Do I Really Need?

The Risk in 1:1 Cloud Migrations

A White Paper by

 SERVERCENTRAL
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How Much Cloud Do I Really Need?

We see it all the time: A company with 50 servers moves to the cloud by creating 50 instances, one for each physical server. The thinking goes that if I'm using this much physical infrastructure, I'll need this much cloud infrastructure. Simply convert servers to instances, and just like that, I've moved to the cloud.

It's a logical approach, but it's wrong.

Often, when we're migrating customers to the cloud, we find ourselves in the odd position of bargaining them down. While they're using 50 servers today, we only see a need for, say, 35 cloud instances to deliver the same service levels and achieve the same objectives with a higher level of system performance. It's very likely the move doesn't require a one-to-one switch from physical servers to cloud instances. Optimizing infrastructure is the fastest way to help our customers realize the benefits of the cloud. If you're thinking about making the switch to the cloud—or if you're already there and find yourself receiving larger bills than you expected—here's what you need to be thinking about.

The No. 1 mistake companies make when moving to the cloud

Rightsizing your infrastructure is a critical step in successfully moving to the cloud—and one we see companies skip all the time. The reality is that in most organizations, servers are wildly underutilized. Take a company we worked with that was running three data centers around the world. The company wanted insight into, and eventually control over, its spending. The C-suite simply didn't know what they were running. After a detailed assessment of the operational and technical environments, we found that the company's three data centers full of servers were running at an average utilization rate of 8 percent. 8 percent!

Unfortunately, this happens all the time. Enterprise IT departments are often stretched too thin to give the job the time it needs—let alone take advantage of constantly changing technologies. As a result, companies frequently end up with a collection of infrastructure they don't need, and more equipment is added to the pile every time there's a request for more capacity. For strapped IT teams, this is the easiest and most direct course of action. The costs of this model are a capital expense nightmare, and the complexity benefits no one.

This situation only gets worse when the same IT team is asked to migrate the company to the cloud. Keeping up with cloud technologies is a full-time job. In ServerCentral's case, we have a whole team dedicated to identifying and adopting cloud innovations and best practices. Overtaxed IT departments simply don't have the resources to keep up. The fastest way for them to check the box of getting into the cloud is to take a one-to-one approach—moving each server to a cloud instance. The problem is they end up duplicating the sizing of the existing infrastructure instead of optimizing it, robbing them of a shot at cost savings. Every time there's a new need, another cloud instance is added, and the costs and complexity of managing the environment continue to increase. When the company gets hit with a massive monthly bill for cloud resources, the exec team's left running a cost comparison between physical and cloud infrastructure, trying to understand how they ended up paying more, without ever seeing a benefit. We have this conversation with companies every single day.

Physical Servers vs. Cloud: Why it isn't one-to-one

The first challenge to understanding cloud is recognizing that physical infrastructure does not equal virtual infrastructure. If a company has hundreds of physical servers that are underutilized, in a virtual environment that's going to collapse down to maybe two virtualized servers each running a number of virtual machines.

Physical infrastructure is typically siloed—but the cloud isn't. When ServerCentral looks to move a customer from physical infrastructure to the cloud, we're analyzing the cloud as a system of components, rather than assessing each individual element. The cloud's ability to quickly move applications and data across components prepares the business for scale and opens it up to opportunities for innovation.

To convey the benefits of cloud, we ask people to think of their physical IT infrastructure as individual Lego bricks. Each piece stands alone, executes certain functions, and holds a certain amount of information. Not that useful by itself, and certainly not a very good toy. The cloud lets you start stacking these bricks. Now, instead of being stuck on individual bricks, information can flow between pieces. One workload that takes up 25 percent of a brick's capacity can join another workload that takes up 10 percent and another that takes up 15 percent. Like the old defragmentation programs you'd run on your PC, the workloads can compress into the smallest possible space, freeing up bricks and increasing the efficiency of your infrastructure.

How much cloud do I really need?

A move to the cloud should be an opportunity to assess current utilization and true infrastructure needs, then build for these requirements instead of repeating past mistakes. Moving 50 servers straight to 50 cloud instances will, technically, get a company into the cloud, but it doesn't take advantage of the cloud's true potential for elasticity and scalability. It doesn't even provide the expected cost benefits.

To make sure our customers actually realize this initial advantage of the cloud, instead of just moving there, we use tools that map server and storage utilization to cloud resources. This way we can see how needs change in a connected environment and assess the compute, memory and storage utilization, as well as the latency, across all instances, not just each individual one. Instead of deciding how much cloud a company needs by looking at how many physical servers it's running, we analyze the amount of data it has and what it needs to do with that data. This helps our customers achieve the first, most basic benefit of the cloud—cost efficiency—by ensuring they're not buying more cloud than they need.

To realize all of the potential of the cloud, there are more steps to take—the biggest one being

application optimization. But making sure you have a thoughtful virtual infrastructure in place that fits your company's needs will position you to take advantage of those other benefits when the time comes. And it will be a vast efficiency and cost improvement over your legacy physical infrastructure.

The benefits of the cloud can seem almost mythic. And when virtual environments are treated the same way as physical environments, those benefits will continue to be a myth. But if you treat your move to the cloud as an opportunity to get your infrastructure needs right, you'll set yourself up for cost savings in the present and more efficient capacity management as your business grows.

For more insight into how much cloud your business needs, schedule a meeting with me.



Tom Kiblin

[Schedule a meeting](#)



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