THE GORILLA GUIDE TO...™
EXPRESS EDITION

Cloudifying Storage Economics
In an On-Premises Data Center

Scott D. Lowe, ActualTech Media

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Introduction

The cloud. This much-ballyhooed paradigm in workload operations has managed to dominate strategic conversations in organizations across the globe. With promises like never having to pay up front for resources again and being able to radically simplify everything about IT, business and technical decision makers are hearing the message. They want the cloud, and they want it now.

Or do they?

The Promise of the Cloud

In reality, the promise of the cloud isn't actually about the cloud itself. It's about all the potential business benefits that can be had from the cloud. Frankly, most business leaders really don't care where workloads operate as long as the business can continue to forge ahead. They want those enticing benefits they hear so much about.

The popular benefits of the cloud include:

- **Simple deployment and management.** Getting started with the cloud takes nothing more than a credit card and a few clicks of the mouse. Compare that to the often lengthy process of deploying traditional infrastructure, particularly when that infrastructure is restrictive in its capabilities. Deployment and management of cloud services is generally considered far simpler than traditional infrastructure.

- **No initial capital costs.** CFOs rejoice! Perhaps one of the most serious challenges inherent in major data center technology investments is that there is a huge cash outlay at the start of the investment period. Companies have gotten used to this ongoing replacement cycle and have crafted their IT budgets to have replacement cycles at the center of their strategy. That doesn't mean that financial managers wouldn't love to see a different option, though. With the cloud, these managers get their wish as the company can begin to use the services they like with no major purchase required.

- **Pay only for what you use.** There's a good reason that CFOs dislike capital expenditures for data center gear. The company can take months or even years to "grow into" their purchases. And, for many, sometimes that growth is never fully achieved, leaving the company paying for resources it will never use. With the cloud, the promise is that you'll never again have to pay for what you don't use. You only pay for what you're using.

- **Simplified growth.** Your business doesn't stand still. But you might wish it did as you consider how difficult it can be to grow your data center as your business needs expand. With the cloud, as you need more resources, you simply work your mouse-driven magic again and add them. You don't need to worry that you've hit expansion limits and the like.

So, you may be ready to jump feet first into the public cloud in order to rein in increasingly complex data centers that are spiraling out of control on the budget side of things.

Not so fast!

Attaining Cloud Benefits in an On-Premises Data Center

Let's take a step back and focus on what has traditionally been one of the more difficult-to-manage and expensive resources in the data center: storage. To put it mildly, storage doesn't traditionally have the best reputation. If you've been involved in storage for any length of time, you likely remember it as a wild resource that required constant taming, and as being really expensive to procure and operate. The upfront costs were often significant, and sufficiently skilled staff members generally commanded pretty high salaries.

That's nothing like the panacea that is the cloud.

In recent years, there have been many market shifts in the storage space. Where once there was complexity, there is now an unyielding drive toward simplicity. Where once there was a massive capital outlay, there are now brand new financial models around storage — ones that have brought this resource back under some semblance of control. Where once you had to buy storage over and over again (brand new storage at each replacement cycle), you now only have to buy it once.

Or, don't buy it at all. There are options available that allow you to procure storage without paying up front. Instead, you can pay on a per gigabyte per month basis for what you use and still get upgraded storage on a periodic basis.

Let's take a closer look at these options.

Technology Choices

When you move into the cloud, you don't worry about the underlying hardware beyond understanding the simple characteristics, such as whether it's SSD or spinning disk. You don't need to think much about what it can and can't do; you simply focus on using it.

When you buy storage for your data center, that picture is a bit different. Often, you're mired in details, comparing one vendor's product capabilities against another's. The goal is to make sure that the storage you buy supports all your technical and workload needs.

Luckily, it turns out that you don't need to worry too much. With the right storage solution, you can simply slide it into your workflow and it will have the features and capabilities you need to support your various workloads. Such features may include an all-flash architecture, support for multiple protocols such as iSCSI and Fibre Channel, and redundant controllers. Why should you have to think about the little (big!) things?

Tegile's line of storage systems has you covered on all fronts and is just about a simple as it gets to deploy new systems. With full support for almost any storage protocol you want or need, you don't have to re-architect your workloads around

any technical limitations. Further, the all-flash nature of many of Tegile's storage systems means that you won't be waiting on your storage anymore.

From an ongoing management perspective, Tegile also makes your life far easier by providing a seamless administrative experience where complexity is significantly reduced from what it used to be.

You may wonder what any of this has to do with storage economics. Well, there are a couple of important points.

First, whether you choose a hybrid or an all-flash storage solution, you're going to get plenty of speed for your workloads. You won't need to worry about performance anymore. That means that you can run even the most demanding applications on-premises, knowing that you have plenty of performance capacity to handle the load.

Second, the administrative ease brings down the burden of storage, which has an indirect impact on overall cost. The less time you have to spend on pointless storage tasks, the more time you're spending on the workload being supported. After all, time is money.

These factors combine to make a Tegile on-premises storage solution a bit more like cloud than some other solutions. But, cloud is about far more than technology; it's about the cost model around how that technology is leveraged.

Financial Structures

Financing IT has never been an easy task. There have been a number of different vehicles by which organizations procured storage hardware, but they've all been based on the idea that the customer is ultimately buying all or most of a storage solution:

- **Outright purchase.** Cold, hard cash. Your CFO reluctantly writes a check for a storage system that he or she knows may never get fully utilized but that has to be paid for anyway.

- **Financing.** Not all companies have sufficient cash to simply buy storage outright, so they choose the financing route. The result is a purchase, although they get to pay off the equipment over time. It's not pay-as-you-go, but is a regular payment that can reduce the cash flow impact of a storage upgrade.

- **Operating lease.** In an operating lease, a leasing company typically buys the equipment from the storage vendor and you simply rent it from them for a predetermined period time. You're not renting based on capacity or usage, though; instead, you're renting based on the initial cost of the equipment with the equivalent of interest added to the top. On an

operating lease, you typically pay a bit less than you do for other financing methods, because the leasing company owns the equipment and you have to return the equipment at the end of the lease. After you return it, the leasing company then generally sells it.

- **Capital lease.** A capital lease looks a lot like a traditional loan in that you're essentially financing the product, but you have some other lease-end options, such as paying fair market value or paying $1 to buy the equipment out.

It can seem as though you need a degree in finance to choose the best option. And remember, you're going to be paying for all the capacity up front, even if you never ultimately grow into your purchase. It's for these and other reasons that the cloud begins to look so attractive.

But what if you didn't have to go through all this? Today, there are a few innovative storage vendors that are making it possible for customers to buy storage using a cloud-like economic model while retaining the storage solution on-premises. For many reasons, many companies either remain wary of the cloud or they've undertaken cloud adoption projects, but realize that there will always be workload presence in on-premises data centers. These retained workloads need a place to operate.

For example, Tegile's IntelliPay is a service under which you deploy an on-premises storage system without having to buy it up front. From there, on a monthly basis, Tegile tracks your capacity utilization and simply sends you an invoice each month for what you use. Even better, you'll typically find that Tegile's monthly pricing is less than what you'd pay if you jumped into cloud services such as Amazon AWS and Microsoft Azure (Figure 1). You can also structure your agreement with Tegile such that, at the end of your agreement period, you have the option to buy out the hardware for $1.
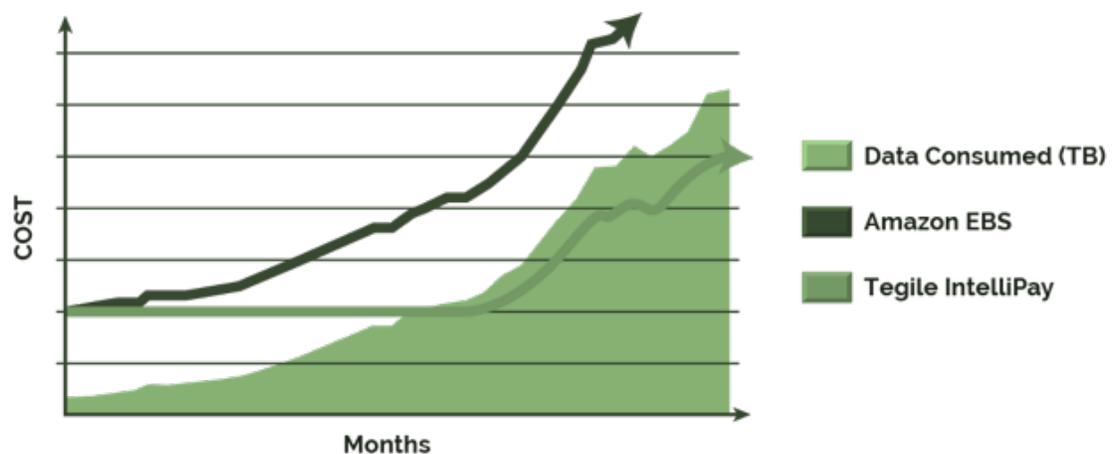

Figure 1. Comparing Cloud vs. Tegile IntelliPay Economics

Never Buy Storage Again

Perhaps one of the most financially frustrating parts of operating a data center is having to re-buy all the hardware every three to five years. It seems like, just as you get comfortable with what you have, you need to tear it out and replace it, because it's become obsolete. Nowhere is this truer than in the world of storage, where obsolescence happens quickly, thanks to the rapid advancement of storage technologies.

What if, instead, you could continually refresh your storage without having to periodically request a large capital expenditure to do so? By going this route, you would have a consistent budget, which CFOs really like, and you'd have the opportunity to stay current technology-wise, which is always a goal.

To this end, Tegile's IntelliCare, the company's support and maintenance service, provides an optional enhancement that helps you mark the end of the upgrade merry-go-round. Called Lifetime Storage (Figure 2), this support enhancement allows you to pay over a period of time for your future storage replacements. You get to choose a three- or five-year term at which point you can get an entirely new storage system, including the controller and media, all under a flat maintenance contract.
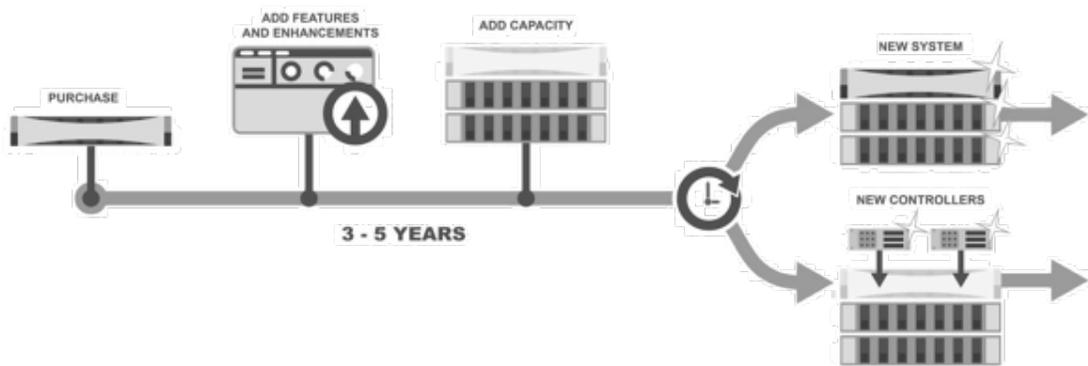

Figure 2. Tegile's Lifetime Storage Offering

Lifetime Storage solves one of the other major financial challenges inherent in on-premises storage — the constant upgrade. With Lifetime Storage service, you're able to provide your CFO with a consistent budget, year-in and year-out. And, to make it even more cloud-like, you are able to combine Lifetime Storage with IntelliPay, meaning that the cost of your next array is amortized across the 36-month term of your IntelliPay contract. No longer do you need to go hat-in-hand to the CFO requesting capital budget dollars.

Testimonial: Chandler Unified School District

"As a school district that prides ourselves on providing a top-quality service level for our students and faculty, our IT department must stay ahead of the curve when it comes to technological capabilities. "Tegile's Lifetime Storage Controller Refresh Program has let us take advantage of all the benefits of the most advanced flash storage, and already, we're looking toward adopting NVMe once it's ready."

-- Steve Ybarra, IT Director

Summary

For whatever reason, if you plan to remain in your on-premises data center—whether it's due to security, workload support, data sovereignty laws, etc.—there's no reason that you need to forgo the great benefits that the cloud has to offer, especially the financial benefits. Through a combination of full-featured solutions that make deployment seamless into any environment, a simple management experience, a pay-as-you-go consumption-based economic model, and a complete lifetime replacement plan for your storage, you are able to get the benefits of cloud without having to jump feet first.