

WHITE PAPER  
**Critical Concerns Change  
When Controlling Cloud**

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# Cloud Costs and Consequences

One of the best “selling points” for moving to the cloud was the idea that you could change from capital investments (CapEx) to operating expenses (OpEx) which were said to be far more predictable, budgetable, and manageable than the expenses involved in running your own data center or network room. Expenses like electrical power, internet access, high-volume air conditioning, equipment maintenance and more would all be replaced by one monthly expense.

That would suggest that all you’d need to do to manage the expense would be to count the number of “seats” or users connected to the cloud and check that against the monthly invoice. It seemed so simple.

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# How Cloud's Consumption Based Billing Compares to On-Prem

Another “selling point” for cloud computing was the idea that, according to the NIST definition of cloud computing, users could request and release resources as they needed to and would only be billed for resources consumed. Consumption-based billing also seemed like a dream come true for the finance department, reducing expenses or at least aligning them to the value of the work performed.

Things were very different when your entire network was installed on your own premises. Finance could assess each of the expenses involved easily enough and allocate the capital investments which would estimate how much IT cost to each of your departments so they could perform bill-backs to calculate each departments profit and loss. It wasn't precise, and took a considerable amount of work to perform each period, but it represented “good” or at least “adequate” control.

Since cloud computing was completely digital and everything generates data about its utilization, the move to the cloud promised far more precise control over expense, and far easier distribution for bill-back. This had wide-ranging implications for the cost of operations, cost of goods sold, and other related costs for which computing was part of the process.

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# Then Came the Big, Bad Surprise

Financial executives anticipated far better control over cloud computing than they had over figuring out who used how much of what on their own premises-based infrastructure.

They hadn't considered the role of people in their calculations, especially when dealing with invisible costs.

A few months into their cloud subscription, many companies received an invoice from their cloud provider. This invoice included the amount due for their subscription level and then listed consumption overages.

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What had happened was simple enough to figure out. Once the cloud migration was completed, users were enthusiastic about getting back to productive work and trying out these new cloud-based services. They immediately went about learning how to request resources and set up their workspaces and workloads.

Perhaps you noticed that the learning only included how to request resources, with no

mention of how to release them when done. Users were leaving resources active for long periods of time without releasing them, incurring additional billing. The more users, the more empty consumption, the higher the bill for overages.

The other contributing factor was visibility. Nothing warned these new cloud tenants that they were reaching their regular billing threshold. As Peter Drucker taught, "you cannot manage what you do not measure." The cost of cloud computing was, simply, not being managed.

# Invisible Costs in a Set-It-And- Forget-It World

Recurring costs become almost completely invisible over a short period of time. In earlier times, you'd have telephone service provisioned, everyone got dial tone and all was good. It wasn't long before you had the bad feeling that your overall telecom costs were getting out of control.

When you brought experts in to analyze your telecom costs, they found that a greater proportion of your usage than you ever dreamed possible were for internal location-to-location calls and faxes that could have just been additional traffic across your data network. They identified numerous accounts that were simply no longer in use by anyone, yet you were still paying for them every month. The various carrier programs you were subscribed to were far from being the most cost effective for your organization.

These revelations and more were quickly corrected but didn't remain corrected for long. Over a short period of time your communication costs ballooned again. So, you had the analysts back in, regularly.

In those days, your only recurring costs were for telephone and internet access. Communication costs. Easy enough to define and maintain some control over.

In the cloud-computing environment, everything is recurring. Productivity suite utilization, cloud data backup service, cloud security services, Infrastructures-a-Service (IaaS), Software-as-a-Service (SaaS), Platform-as-a-Service (PaaS) and XaaS – Everything-else-as-a-Service.

Each features recurring periodic billing, many include consumption-based billing, and once you've set any of them up, they become invisible almost immediately. You no longer think about them. You don't proactively manage them. You just keep paying for them.

The thing to think about is that this scenario plays over and over again which each new cloud service you add. Unless you establish proper controls to manage each cloud expenditure, you may find yourself facing more of the downside with less of the available upside. Recent changes by the FASB and IASB exacerbate the problem, according to a [July 2018 article in Forbes](#), increasing the need for OpEx controls.

The good news is that it is far easier to establish and maintain proper controls over cloud services spend than it ever was when your network was local. If your hesitation to establish controls was based on how onerous it had been to gather all the invoices and allocate, take heart. Every cloud service is completely digital, and each generates all the data you need to properly monitor and manage them. This means you can obtain all the benefits of a fiscally-responsible IT function without having to invest tons of man-hours in manual processes.

Putting the tools into place to obtain all this data in a way that makes it easy to gain full visibility into everything that is happening pays an ongoing stream of benefits and return for you. On an ongoing basis you will identify idle resources that a user didn't release, making it easy to stem that unnecessary flow of dollars, and giving you the opportunity to educate and motivate that user to release resources when finished with them.

You'll also be constantly aware of how close you are to incurring overages based on consumption-based billing so you can take appropriate action. Unused accounts will become obvious, reducing the incidence of you re-purchasing new licenses when new users could simply take over the existing account of a now-departed user. Since your tools connect to every cloud service through an application programming interface (API) you will never sort through paper invoices again. Instead, the cloud services will simply report their activity to you constantly.

The right tool will even recommend superior pricing programs that you should be taking advantage of so you don't end up paying any more than you have to.

You will enjoy unparalleled visibility into ongoing operations and total control over costs.

## Establishing Proper Controls - Far Easier in the Cloud

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# Managing the Political Layer of Your Network

Over the past several years, many line-of-business (LoB) managers have gone rogue, subscribing to cloud services themselves to support their departments, creating what is popularly called “shadow IT”.

The downsides of shadow IT are numerous. Loss of cost control. Loss of operational control. Serious security lapses and breaches. An end to regulatory compliance, with all the attendant dire consequences. The creation of IT “silos” which lead to significant process, expense, and data duplication. No leveraging of volume-based provider programs.

If a shadow IT rogue simply connects through your network, your monitoring tool will see it and alert you to take immediate action to bring them in out of the cold. Otherwise, your well-controlled cloud network will completely justify your case when you ask senior management to stop the shadow IT operation or allow you to help manage and support it, and the LoB protests.

## Implications for Proactive Planning

Having full information regarding the utilization and performance of your cloud services over time informs and fine-tunes your ability to forecast future costs and model possibilities to accommodate growth, diversification, acquisition, or other major business changes. It is said that the difference between the great company and others is that the great company knows its costs. At all times, you will know not only your current and period-to-date cloud costs, but also have an excellent estimation of future costs as well.

# Conclusion

When manually tracking cloud expenses you end up having high-value technology experts performing low-end paper tracking when they could be employed far more profitably. Recognizing the loss of fiscal control that came along with the transition to cloud, Calero-MDSL added Cloud Services Expense Manager (CSEM) to augment its already-celebrated Technology Expense Management (TEM) system. CSEM connects to your cloud services and provides robust cloud expense visibility through interactive dashboards and other graphical reports. In addition to interfacing with your cloud services, completely cloud-based and managed, CSEM also integrates smoothly with your existing ERP system to make the path from productivity to paying-the-bill seamless.

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