

The unexpected costs of moving to the cloud

By [Phil Curran](#)

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A few years ago, companies thought the cloud might help save on costs. No doubt everyone recalls the plethora of articles with titles such as: "How to save time and money in the cloud" or "Cloud Computing can generate massive savings". Analyst studies from leading think tanks from the likes of Booz Allen Hamilton and The Brookings Institute also supported the notion that moving to the cloud will result in massive cost reductions in IT spending.



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The reality hasn't quite lived up to the expectation. In a 2014 IDG Enterprise Study, 63% of organisations indicated IT agility was a major driver of cloud adoption; 61% said IT innovation and another 58% said "access to critical business data and applications". While only 23% said the cloud was reducing IT costs and 20% said the cloud was reducing IT headcount.

Now headlines are more likely to read like this one from the Wall Street Journal "The Hidden Waste and Expense of Cloud Computing". So what is really happening?

The Implications of the Shift from CAPEX to OPEX driven IT

Customers are finding a set of "unexpected costs" popping up, mostly in the form of an unexpected or unusually large bill from a cloud provider. We hear stories of cloud instances left running, but unused, as cloud sprawl becomes a bigger challenge. The controls aren't in place to help track and manage resources, and the mindset isn't there in terms of thinking about the best way to control and manage the cost of the cloud.

In the traditional Capital Expenditure (CAPEX) centric model (which is how traditional data centres are built), IT is driven by large up-front purchases of hardware and software that follow the three to four year vendor refresh cycle. However, in a cloud-centric view of the world driven by Operational Expenditure (OPEX), everything shifts to monthly or annual subscriptions. Ultimately this should be a good thing. Replace a highly variable CAPEX model, driven by infrequent large

purchases, with a very smooth (in theory) predictable OPEX model with standard, recurring costs every month.

The long-standing traditional CAPEX centric model based on large upfront costs did have the benefit of well-established control processes when it came to managing resources. However, those days are fading rapidly. We have entered a transition period where IT is technically using the new utility delivery model, but most are still thinking about the cost and management processes for IT in the form of CAPEX.

Time to change

Getting our heads around this problem is as much about mindset and management processes as it is about tools and technology. In IT, we have been thinking in terms of high-value refresh cycles and CAPEX management for many years. Thinking like a utility company is going to take some time - but the organisations that can change their thinking quickly and efficiently are going to have a major advantage.

As we evolve our thinking, we're going to need some new tools to help us track and optimise all this. Imagine a single, web-based tool that will let you:

- Provision large numbers of cloud instances
- Attach expiration dates to those Virtual Machines (VMs)
- Automatically power VMs down after expiration
- Manage across many cloud platforms in a single interface.

This type of functionality makes sure that a team (for example a development team working on a new application) does not go home for the weekend and "leave the water running" on their project sitting in AWS. The idea is to set up some automation that does the "custodial work" or clean-up work for you.

To avoid unexpected costs with cloud, we need a new system of accounting and management that tracks actual Central Processing Unit (CPU) cycles, network bandwidth and storage consumed, not just units purchased and sitting idle. The days of counting up physical boxes was left behind quite a few years ago when we started virtualising large swaths of the data centre. However, let's face it - now we're just counting sockets and VMs instead. If we start tracking actual legitimate usage and consumption on an ongoing basis, then we might find that cloud doesn't cost us the earth.

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