



February 10, 2009

Cloud Computing Can Save You Money

Talking To Your CFO About Cloud Computing

an introduction by Simon Yates

EXECUTIVE SUMMARY

Infrastructure and operations (I&O) is underfinanced, and those in the profession should know that they need to add new technologies if they want to lower their costs. The appeal of presence technologies like cloud computing is growing as a viable counterweight to potential project loss and dwindling travel budgets. Cloud's month-by-month payment models are growing appeal, while its rapid project rollout speed and specialist focus prevents the company from suffocating financially during the transition. Those in the I&O profession will continue to squeeze productivity from such technology opportunities, just as they always have, using tools like cloud-based collaboration to save their companies money.

COST SAVINGS DRIVE INTEREST IN CLOUD COMPUTING

The catchphrase that will burn a CFO's ears when being pitched the benefits of cloud computing is "pay-as-you-go" — punctuated with "cost-saving" shortly thereafter. The feeling is that pressing economic times will fuel interest in a cloud platform. The additional benefits of cloud computing include launch speed — another cost-cutting measure — and outsourced cloud specialists that will allow your IT staff time to focus on more pressing business-driving tasks. The economic recession is forcing companies to expand and contract in different directions, and it's in these newer environments that cloud's use and legitimacy is being validated.

SAVE MONEY WITH A PAY-AS-YOU-GO MODEL

Paying upfront for IT services was more common when economic conditions were ideal. It's Forrester's belief that as companies evolve within a less-than-ideal financial climate, so too will the methods for paying for things in IT. Providers of cloud-based solutions will mature as needed to keep pace with what companies want and require.

Cloud computing is a visible, here-and-now investment, rather than a lump sum of capital signed away in Q1, gone for the rest of the year. A cloud-based solution requires you to pay only for what you use, preventing a black-box situation for your IT budget. Moving to cloud computing in any capacity is an expansion requiring at least some money. If possible, plan on small, rapid pilots to act as installation milestones, and structure the contract deal so that startup costs are paid over time rather than as a single wad of cash.

I encourage you to read the full report below.

Simon Yates, Research Director & Vice President, IT Infrastructure & Operations

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October 29, 2008

Talking To Your CFO About Cloud Computing

by Ted Schadler

for Information & Knowledge Management Professionals



October 29, 2008

Talking To Your CFO About Cloud Computing

Cloud-Based Services' Pay-As-You-Go Model Works In Good Times And Bad

by **Ted Schadler**

with Matthew Brown, Michael A. Doyle, Frank E. Gillett, and Sara Burnes

EXECUTIVE SUMMARY

Even in a downturn, companies must get real work done. And that means, for example, that information and knowledge management professionals must still roll out collaboration applications, particularly if travel budgets are slashed. But in capital-constrained times, the upfront cash outlay and financial risk of on-premise solutions can prevent many projects from being funded. Fortunately, cloud-based collaboration service providers offer a cash-flow-friendly alternative to on-premise installation for projects including email overhauls, wiki workspaces, and Web conferencing. And cash-flow-friendly is a concept that every chief financial officer (CFO) will understand.

TABLE OF CONTENTS

2 Cloud Computing Offers Three Business Benefits

3 A Pay-As-You-Go Model Is Key In Crunch Times

6 New Terms In Cloud-Based Service Contracts

RECOMMENDATIONS

7 Add Expansion Metrics To Your Business Cases

8 Supplemental Material

NOTES & RESOURCES

Forrester interviewed 10 user companies and 12 vendor companies, including Cisco, Covisint, Dimdim, Google, IBM, Jive Software, Microsoft, PBwiki, Socialtext, Thomson Reuters, and Veodia.

Related Research Documents

["Future View: The New Tech Ecosystems Of Cloud, Cloud Services, And Cloud Computing"](#)
August 28, 2008

["Forrester's SaaS Maturity Model"](#)
August 14, 2008

["The Total Economic Impact™ Methodology: A Foundation For Sound Technology Investments"](#)
August 4, 2008

["Get Ready For Collaboration In The Cloud"](#)
March 18, 2008

["Is Cloud Computing Ready For The Enterprise?"](#)
March 7, 2008

CLOUD COMPUTING OFFERS THREE BUSINESS BENEFITS

CFOs will be interested in the pay-as-you-go economics of cloud computing because it keeps cash in the bank longer. Information and knowledge management professionals can take advantage of these same economics.¹ After all, pay-as-you-go Web conferencing, hosted email, and a growing array of collaboration and content services are already available from cloud-based service providers like Cisco, Google, IBM, Microsoft, and a slew of startups and other vendors.² (We use “cloud computing” and “cloud-based services” here as catchall phrases that include software-as-a-service applications as well as middleware and hardware services delivered over the Internet.)³

The service provider pricing model of cloud computing is particularly valuable when economic uncertainty limits the capital and IT resources available to firms. But the economic drivers of cloud computing and cloud-based services are solid in good times and bad (see Figure 1).⁴ You can explain cloud computing and cloud-based services to your CFO by describing them as:

Buying IT capacity and applications as needed from a utility service provider.

The ability to pay as you go from a service provider rather than spending upfront feels natural to a CFO — there’s nothing new about buying services. What’s new is that cloud computing offers a delivery and financing alternative to one of the bastions of corporate capital expenditures: IT.

Projects with the pioneers of cloud computing — like Salesforce.com, Amazon Web Services, Thomson Reuters Messaging, Covisint’s industry collaboration platforms, and hosted email — reveal three business benefits of cloud-based services:

1. **Speed: Accelerate a project rollout.** In one project, a financial services company moved its employee portal to a cloud-based service provider and launched it in 60 days. After 18 months, another firm is still building the employee portal in the corporate data center. The difference? The cloud-based solution started with a prebuilt foundation.
2. **Focus: Outsource non-core competencies to a service provider.** Cloud computing specialists worry about the nuts and bolts so that you don’t have to. Using a cloud-based service provider can free up your IT staff to focus on things that drive the business: customer service applications, not email; Web site service innovation, not just another software upgrade.
3. **Funding: Pay as you go rather than spend upfront.** Instead of paying upfront for hardware, software, and consultants to set up and run your email system, you pay a cloud-based email provider by the user by the month. This lowers the cost of launching new IT projects, which speeds innovation and increases the number of projects that can be funded.

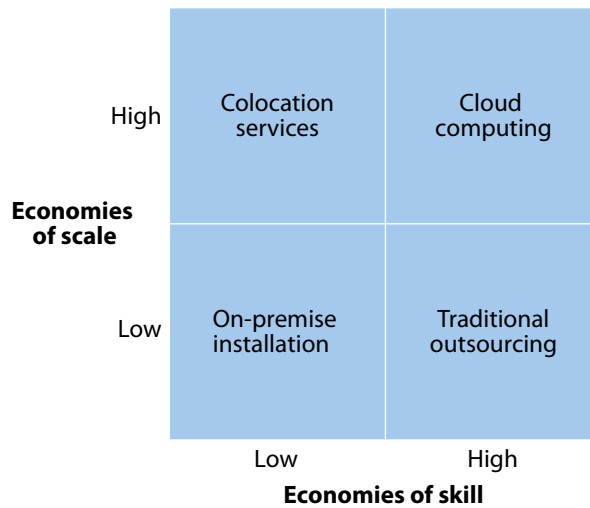
A venture capitalist we know nailed it when he told us, “I don’t invest in servers.” His portfolio companies use a cloud computing service provider like Amazon to deliver their application. As demand ramps up, so does the cost of their service. For this investor, cloud computing means he can get a startup to market in 18 months for \$5 million rather than in three years for \$15 million.

Figure 1 The Sources Of Economic Value In Cloud Computing And Cloud-Based Services

1-1 Sources of economic value in cloud computing

Factor	Source of value	Example
Dedicated specialists	Specialists automate rote activities and master complex activities, thus doing more work with fewer people.	A cloud-based email administrator handles 10,000 mailboxes, about five times more than an enterprise email administrator.
Open source software	Open source software licenses are free or nominal when compared with commercial software.	Linux and the Apache Web server are free, while Windows Server costs at least \$3,000.
Higher utilization	With relentless optimization, cloud computing providers get more value out of each server.	Enterprise data centers run at 5%-10% server utilization; cloud data centers at five times that level.
Commodity hardware	Cloud computing providers source hundreds or thousands of identical servers, and cut costs as a result.	Manufacturers build servers for high-volume service providers, at a healthy discount over commercial boxes.

1-2 Economies of scale and skill drive cloud computing



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Source: Forrester Research, Inc.

A PAY-AS-YOU-GO MODEL IS KEY IN CRUNCH TIMES

The financial benefit of paying by the month rather than upfront is great when times are good, but especially important during a downturn. And while cloud computing is not yet ready for many enterprise IT needs, cloud-based collaboration services are a viable option for most firms today.⁵ And Forrester believes that cloud-based application services will become increasingly important as the providers mature.⁶

To a CFO, IT capacity or an application purchased from a cloud-based service provider is an operating expense (opex) that can be scaled up to meet a rising business need — or turned off when the need evaporates.⁷ The same solution hosted in the corporate data center is a sunk cost that includes a capital expenditure (capex) that must be carried on the balance as an asset that loses value as it depreciates. That difference between capex and opex yields financial benefits that CFOs value (see Figure 2):

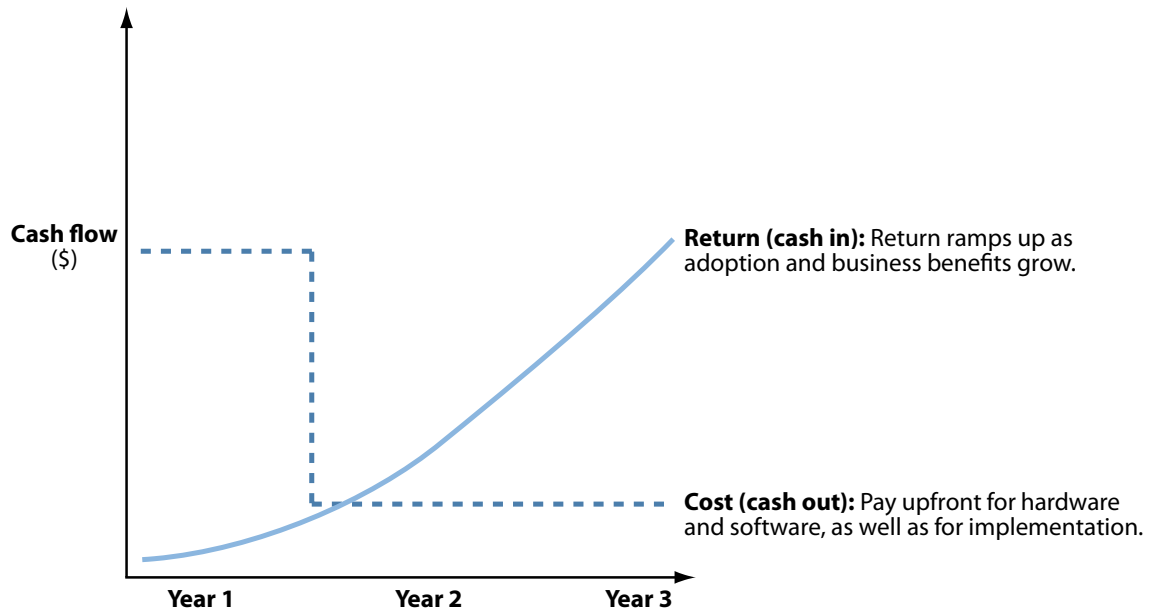
- **Better cash flow.** The biggest financial benefit of cloud computing, particularly in these capital-constrained times, is avoiding taking on debt and keeping cash in the company longer (see Figure 3). If a project uses a cloud-based service provider, then the CFO avoids writing a big check upfront. Instead, checks are written monthly or quarterly in alignment with the return.
- **Lower financial risk.** A cloud-based solution means that you pay for only what you use, and you can terminate the contract. In contrast, on-premise solutions mean spending money upfront for hardware and software with an uncertain payoff. And that means more financial risk. After all, what if the benefits don't materialize? Too bad, the money's been spent.
- **Greater financial visibility.** A cloud-based service provider can tell you how much it will cost to add a user or process another transaction. That visibility is a comfort to a CFO who must keep track of where the money is going. In most situations, IT is hard-pressed to deliver that same kind of financial transparency.
- **Healthier return on assets.** One of the advantages of cloud computing's pay-as-you-go pricing model is that the cost is incurred in the same period that the value is delivered.⁸ For CFOs, this means that the balance sheet doesn't carry an ever-depreciating capital asset of hardware and software that lowers the important financial metric of return on assets.⁹

Figure 2 The Financial Benefits Of Cloud Computing And Cloud-Based Services

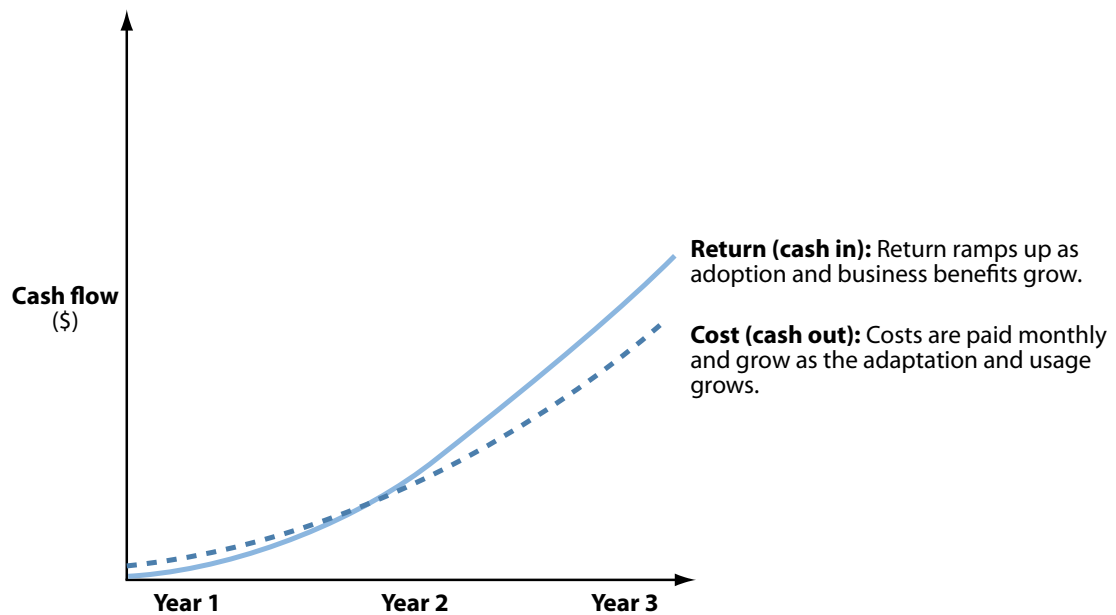
Factor	On-premise	Cloud computing
Expenditure type	Capital expenditure (capex) Operating expense (opex)	Operating expense (opex)
Cash flow	Servers and software are purchased upfront.	Payments are made as the service is provided.
Financial risk	Entire financial risk is taken upfront, with uncertain return.	Financial risk is taken monthly and is matched to return.
Income statement	Maintenance and depreciated capital expense	Maintenance expense only
Balance sheet	Software and hardware are carried as a long-term capital asset.	Nothing appears on the balance sheet.

Figure 3 Mastering The Cash Flows Of Cloud Computing

3-1 Cash flows: on-premise solution



3-2 Cash flows: cloud computing solution



NEW TERMS IN CLOUD-BASED SERVICE CONTRACTS

Cloud-based service providers are motivated to deliver quality service to attract and retain customers. But the very nature of service delivery means that cloud computing also raises new questions for the business sponsor, including:

- **How are we protected in cloud-based service contracts?** A contract with a cloud-based service provider is like that of an IT outsourcer or electric utility. The contract will have to include terms for intake and migration services, service levels, problem escalation, termination rights, and failure compensation. These are often new concepts for information and knowledge management professionals used to buying hardware, software, and labor. But your vendor sourcing and legal teams can help.
- **How will the monthly costs grow over time?** A potential downside of cloud computing's pay-as-you-go model is that the monthly service costs will grow as usage increases. To avoid breaking the operating budget, IT professionals will have to establish long-range planning guidelines to anticipate demand for the service and negotiate pricing to insist on volume discounts as usage scales up. The good news is that the healthy competition from cloud computing service providers like Cisco, Google, IBM, Microsoft, and a horde of smaller specialists will keep prices down over the long haul.
- **Do we own our data?** When a service provider hosts your application, it's natural to wonder if you own your data and if it's safe. Be sure to specify ownership rights and demand a timely response to data requests, even if terminating the contract. Information and knowledge management professionals dealing with local laws or skittish security chiefs will have to ask for inspection rights into the service provider's data center and information architecture to be assured that confidential information remains protected and compliant with local laws.
- **How much do our own IT services cost?** When a cloud-based service provider can deliver the same solution as IT can, the CFO will wonder if the cloud computing alternative is cheaper. In order to make an apples-to-apples comparison between an on-premise solution and a cloud-based alternative, IT professionals will have to master the principle of activity-based costing: putting a price on a user or a transaction.¹⁰ Start by building cost models for IT service delivery that factor in all hardware, software, maintenance, data center operations, and staff costs.¹¹

RECOMMENDATIONS

ADD EXPANSION METRICS TO YOUR BUSINESS CASES

Information and knowledge management professionals are already presented with myriad opportunities to launch new applications with cloud-based service providers: Cisco for Web conferencing; Dimdim for B2B collaboration; IBM and Microsoft for email; Jive for workspaces and social networks; Socialtext for wikis; Veodia for employee-generated video; or ZoHo for shared documents.

Cloud computing both simplifies and changes the requirements of a typical business case. You can de-emphasize the long-term benefits projection required for a typical capital-intensive business case. But you will need to add “expansion metrics” to govern when and how you expand your use of a cloud computing service:

- 1. Establish a success metric that links return to impact, hence to more spending.** To lay the groundwork for spending more as the service ramps up, you should create a financial or productivity metric that reflects the value delivered as more people use the application. You can then match this financial benefit to the cost of providing the service to make the case for expanding the project. A methodology like Forrester’s risk-adjusted return Total Economic Impact™ (TEI) model can help.¹²
- 2. Plan on small, rapid pilots with pre-planned expansion milestones.** With cloud computing, you can get started with a credit card, as WebEx proved so mightily as it grew through the last recession.¹³ Translate that low cost of entry into enterprisewide success by plotting an expansion road map that includes milestones for measuring usage and impact, re-assessing providers, renegotiating pricing, and checking on the need for more employee training.
- 3. If needed, structure the contract deal so startup costs are spread out over time.** Many providers will lower your cost of entry further by trading off a time commitment with a lower initial cost. For larger implementations, you can spread out the user setup and data migration costs by asking for a payment model that spreads those costs out over the first year. The pay-as-you-go pricing and low cost of entry remain, but the monthly price and time commitment increase.

SUPPLEMENTAL MATERIAL

Companies Interviewed For This Document

Cisco	Microsoft
Covisint	PBwiki
Dimdim	Socialtext
Google	Thomson Reuters
IBM	Veodia
Jive Software	

ENDNOTES

- ¹ Forrester has defined cloud computing as “A form of standardized IT-based capability — such as Internet-based services, software, or IT infrastructure — offered by a service provider that is accessible via Internet protocols from any computer, is always available and scales automatically to adjust to demand, is either pay-per-use or advertising-based, has Web- or programmatic-based control interfaces, and enables full customer self-service.” In this report, we cut through the mist to segment the offerings into five cloud services markets. Two of these markets, Web-based services such as Google and software-as-a-service offerings such as salesforce.com, are known markets delivered from the cloud. These combine with three new cloud-infrastructure-as-a-service markets: 1) app-components-as-a-service; 2) software-platform-as-a-service; and 3) virtual-infrastructure-as-a-service. See the August 28, 2008, “[Future View: The New Tech Ecosystems Of Cloud, Cloud Services, And Cloud Computing](#)” report.
- ² From an information and knowledge manager’s perspective, putting productivity and collaboration software in a cloud-based model has clear benefits — it’s potentially much less expensive, easier to manage a single source of truth, and is available anywhere, at any time. See the March 18, 2008, “[Get Ready For Collaboration In The Cloud](#)” report.
- ³ Cloud computing is often associated with multitenant architectures, where many customers share a single set of servers and storage. Google Apps and Amazon EC2 work this way today. But single-tenant service providers, such as traditional Exchange outsourcers, also provide pay-as-you-go services and are here treated as cloud computing service providers as well.
- ⁴ Apache Web and Linux are mentioned in Figure 1.
- ⁵ Cloud computing is a new IT outsourcing model that doesn’t yet meet the criteria of enterprise IT and isn’t supported by most of the key corporate vendors. It’s wildly popular with startups, exactly fits the way small businesses like to buy things, and has the potential to completely upend IT as we know it. Infrastructure and operations professionals can try to ignore it as it is just in its infancy, but doing so may be a mistake as cloud computing is looking like a classic disruptive technology. See the March 7, 2008, “[Is Cloud Computing Ready For The Enterprise?](#)” report.

- ⁶ Forrester's SaaS maturity model provides an assessment of the solutions and underpins our guidance on realistic strategy transformation for those software vendors and services providers considering a SaaS business model. See the August 14, 2008, "[Forrester's SaaS Maturity Model](#)" report.
- ⁷ The structure of the cloud computing service contract determines how easy it is to turn the service off, but in many situations the terms are month-to-month. In others, firms will want to commit to longer periods to spread out the onboarding and migration costs.
- ⁸ This "cost matching," where cost is matched to revenue in the same financial period is one of the generally accepted accounting principles (GAAP) that govern how a company tracks and reports on its financial health.
- ⁹ Return on assets (ROA) is calculated as net income divided by total assets. ROA is one of the financial metrics that CFOs and investors use to determine how efficiently the company's management is operating.
- ¹⁰ Activity-based costing (ABC) is an approach to cost management that creates metrics that link "indirect costs" (like manufacturing plants and IT systems) directly to outcomes (like cars produced or users served). The benefit of ABC is that it gives managers a very simple way to understand what it will take to produce one more car or serve one more user. It's also the way cloud computing providers price their services.
- ¹¹ CIOs have been trying to pull away from their CFOs — trying to get beyond their historical relationship that was focused on cost. But increasingly, CIOs and CFOs need to work together, addressing enterprisewide issues like process optimization and risk management and improving IT's value realization. The steps CIOs should take fall into two categories: addressing IT's responsibility to the finance organization and enhancing the CIO's role as a change agent. See the August 4, 2008, "[CIOs: Nurture IT's Relationship With Your CFO](#)" report.
- ¹² Underlying any investment is the ever-present question of "What am I going to get for my money?" To answer this question, Forrester developed the Total Economic Impact (TEI) methodology that provides a rigorous cost and benefit analysis framework that explicitly incorporates an evaluation of future technology and business flexibility and associated risk. See the August 4, 2008, "[The Total Economic Impact™ Methodology: A Foundation For Sound Technology Investments](#)" report.
- ¹³ Cloud computing pioneers like WebEx (now Cisco WebEx) and Salesforce.com thrived during the last recession by lowering the cost of entry and tapping into latent demand for new IT services. In the case of WebEx, any sales manager or businessperson could launch a Web conference with a credit card.

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