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ROI Tutorial: Cloud Computing with Doug Jones

An ROI Innovation Report

From the Cloud Computing Innovation Series

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This document contains an edited transcription of a February, 2010 video interview with Doug Jones, Business Unit Executive, Cloud Computing for IBM Canada. In the session, we explored the themes first raised in our roundtable discussions on Cloud Computing, in order to provide additional insight into ways that public and private-sector organizations can derive financial benefit from cloud adoption. The interviewer in this session was Michael O'Neil, Chief Content Officer for IT in Canada.

Michael O'Neil: Hello, and welcome to the IT in Canada network for a special video session on cloud computing. I'm Michael O'Neil, chief content officer for the IT in Canada network. And today I have the pleasure of speaking with Doug Jones to ask some detailed questions on the application of the cloud to IT business challenges in 2010. Doug, thank you for joining us.

Doug Jones: My pleasure.

Michael: This is the second time we've had a chance to talk about cloud. In our first conversation, we had a round table that included executives from Bank of Montreal and the city of Laval that provided much of the input for our "All About Cloud ROI" report. After preparing the report, I ended up with a few areas I was hoping to explore in a little more depth, based largely on the comments that you provided to that discussion.

Doug Jones, Business Unit Executive, Cloud Computing – IBM Canada

One of the points you made was that cloud isn't just a one-time deployment – it's more like a journey. And you mentioned that many clients start by looking at cloud as a way to cut costs, and then it expands through the organization. Can you walk us through this cloud journey?

Doug: Sure. Many clients are looking at their environment right now, trying to understand what parts of their environment would be conducive to cloud computing. And quite frankly, there are parts of an IT environment that should probably never move

to the cloud. So I believe IT, in the future, is going to be a combination of traditional IT deployment and cloud computing. Many clients are at the stage of determining where is the right fit for them, depending on the applications they're running and the infrastructure that they have deployed.

Michael: And what are you seeing with respect to the delineation between the applications or the parts of your infrastructure that really reside best inside your organization, running on on-premise equipment, versus those that transition neatly to a cloud environment?

Doug: Well, if a client has an application or a workload that's heavily transaction-based, like an online banking application, for example, it's probably not the best fit for a cloud environment, quite frankly. However, other applications that have a large variation in workload, and need to be deployed so that users can get access anywhere, anytime, anyplace: these are a very strong fit for a cloud computing environment.

Michael: So cloud applies best to applications with a dynamic workload, and a need for multiple points of access.

Doug: Exactly.

Michael: And then what compels someone to actually adopt cloud? Is it CAPEX? Is it OPEX?

Doug: Great question. I think, initially, clients are looking at it as a strong return on investment: "How can I deploy cloud today in my environment?" So cloud provides strategic value, but it provides some short-term cost savings. However, as clients go through the cloud journey, there are other things that are important beyond cost savings, such as the flexibility that cloud provides to the workforce, and new business deployment models; with cloud, it's easier to put an application out, get it up and running very quickly and make it available to the masses.

Michael: And that's really the 'part B' of the question I wanted to ask you about that journey. An organization goes ahead, and they deploy a cloud infrastructure, and they get their users used to accessing at least some systems via a web interface. What do you see is the next step in terms of using that infrastructure to enable the distribution of net-new applications? And are we at that stage yet, or is that still a future stage?

Doug: Well, I think we've got a variety of clients. Some are just starting out on a cloud journey. Others have been deploying it for a while. And the ones that have been deploying it for a while are now at the stage where they're contemplating when their next applications are rolling out and assessing, right from ground zero, is the best place to put this application a traditional environment or a cloud computing environment?

Quite frankly, I don't think many customers are at that stage. Most of them are at the beginning of their journey. They're looking at various workloads, more at the infrastructure level, versus the application level, at this point.

Michael: And as you see more and more customers get to that point, looking into your crystal ball, do you expect that a lot of those applications that they do think about deploying as additional layers in the

cloud stack will be re-hosted applications that they're already using? Or do you think they'll be largely net-new applications that extend the functionality that IT delivers to the business?

Doug: Well, we're actually seeing both. We're seeing customers re-evaluating current applications and whether or not they should be redeployed to a cloud or not. Sometimes it's because of cost savings. Other times it's because that application is growing. And rather than invest more in the current environment and have to build an environment that is designed to take the peak workload - that's what a cloud environment will do a lot, is help knock off those peaks, right? You only pay for what you use in a cloud environment.

But then other clients, actually, like I said earlier, if they're putting a new application online, they're evaluating, right from early stages, right in development.

As a matter of fact, some clients that have deployed a test-and-development cloud are in a very good position to be testing that application right in the early stages of development and making the determination, right at the very beginning, is it cloud or is it not cloud?

Michael: And that would seem to streamline the ability to provide net-new functionality, test, develop, QA, deploy, all in one platform.

Doug: Exactly.

Michael: That's a pretty compelling argument in favour of cloud as a platform for those apps. So let's change gears a little bit and look at some of the scenarios that you just mentioned. We have spoken in the past about QA, test, dev, as one application of cloud, and business continuity and backup as another application of cloud.

And of course, people talk about cloud as a platform for software-as-a-service. I wonder if we could look at some of those scenarios and just ask you a little bit about how cloud delivers real benefit to the user in those scenarios.

Let's start with backup and recovery. How does cloud improve the economics or deliver unique functionality for backup, recovery, and business continuity?

Doug: Well, on the backup side of things, if you're using a cloud environment to do backup and recovery, it takes away all those daily operational tasks: physically touching tapes, shipping them to a vault somewhere, offloading that vault perhaps once a week to an off-site location. So all the physical labour that's part of daily backup and recovery goes away with a cloud environment.

Then when you look at the recovery side of using that environment, just because a cloud, the way it's built fundamentally, you can recover from anywhere, anyplace, anytime, it then changes your strategy in terms of how you would recover from a disaster and leaves you a lot more flexible in time of disaster.

Michael: That's a fascinating answer, because what you said, to paraphrase, using my own simple interpretation of that, is that from a daily operations point of view, you actually save on OPEX, which is interesting because most people point to CAPEX as the compelling first mover in cloud. And then, when you get to the recovery end of things, you actually get new strategic options....

Doug: Right.

Michael: So I guess that's what you meant by "This is a journey..."

Doug: It's a journey, right. And so customers are usually immediately attracted by the cost savings. But then all the other benefits come into play, like disaster recovery. Being able to recover from anywhere, anyplace, anytime has business value.

Michael: Especially when you start taking into account pandemics or other scenarios like that.

Doug: Absolutely. Enabling workforces to work at home, backing up their systems remotely... Even though they may have systems at home, not only restore from anywhere, anytime, anyplace, but being able to back up anything anywhere, anytime, anyplace.

Michael: Restore from, restore to.

Doug: Back up to, right. From, to. Yeah.

Michael: So let me ask you the same question with a different scenario. Where is cloud a better way of supporting development, test, and QA?

Doug: We're finding that most customers are finding that development and test is the low-hanging fruit. To get started in cloud computing, it's just a great place. When you actually go and take an inventory of what clients have sitting on the floor, usually between 30 to 50 percent of their servers and IT resources are dedicated to dev and test.

Michael: Wow.

Doug: You don't realize it until you actually go around and start adding them all up. They're under desks. They're in back rooms. They're in corners. When you add all that up, it's an overwhelming number. So, if you were to deploy a dev-test cloud, you take that huge footprint of 30 to 50 percent, which, by the way, is the least-used equipment that clients have...

Michael: Sure.

Doug: Could be like five percent [utilization], maximum.

Michael: Right.

Doug: And suddenly, you can dramatically reduce that footprint.

Michael: So you get huge CAPEX savings then?

Doug: Huge CAPEX savings.

Michael: And then, I think one of the things that came out of our roundtable discussions, you also get much faster deployment times.

Doug: Well, that would be another benefit. A lot of time is spent, in terms of setting up test environments. So a cloud computing environment, for example, IBM is building cloud computing environments that will deploy a dev/test environment within 15 or 20 minutes. Whereas, in many client environments, it can takes weeks, because you've got people going around, wiring things together, finding the right software version off the shelf, assembling it all.

All that laborious part of things now gets shrunk down to minutes. And so if you can build a test environment, for either a developer or a tester, within 20 minutes, now you can do more testing and better testing and accelerate that application moving into production.

Michael: Sure, which gives you the opportunity to develop more applications.

Doug: Exactly.

Michael: At some fundamental level, the IT industry is stalled in its application to new green field opportunities.

Doug: Yes.

Michael: There was a big wave of innovation when servers were first introduced. And another big wave of innovation when clients were first introduced. And a wave of innovation with the Internet. It seems like it [cloud] enables yet another wave of applying technology in areas that it hasn't. Or just rehosting applications, which is the SaaS message. And I know that you said that, for the most part, we're seeing the infrastructure, rather than SaaS, in real life…

Doug: There are exceptions for sure. And there are clients who have already taken applications, business applications, and deployed them into a cloud environment, whether it be a public or private. But most of the clients I'm coming across today are really still at the infrastructure level, like a dev/test environment for example, or a backup and recovery. But, once those systems are in place, the next thing on their mind is, OK, what applications can I now move to those environments?

Michael: And one of the interesting things, I was just at a customer briefing this morning. And the customer is actually running a financial system on on-prem equipment. But an important part of their evaluation criteria was, do I have at least the option of running it on-prem or in the cloud? With three different packages that they evaluated, one was cloud-only, one was on-prem only, one was you can run the application wherever you choose. And they actually opted for the application that they could start off in-house and move to the cloud when they get comfortable with that.

Doug: But it could be in-house cloud environment and an external cloud environment.

Michael: It could be.

Doug: And some clients are deploying it where they actually deploy in-house, as a cloud environment, but set it up so that when there is a peak in capacity needed, it goes and pulls capacity out of an external cloud.

Michael: Is that like impossible to configure, or is that something that…

Doug: No.

Michael: ... IT departments can just avail themselves of the extra horsepower in the public cloud?

Doug: One of the great things about a cloud environment is that it becomes elastic and flexible. And so you have a cloud and, by definition, a cloud needs to grow and shrink according to capacity. And one way you can add capacity to a privately-owned cloud is to link it to a public cloud service.

Michael: And I know that in our roundtable, back to that user-specific scenario, you said that one of the important evaluation criteria that buyers should consider, when they're looking at a potential supplier, is, do they enable you to move neatly from public to private? Or blend public and private? Or move from one supplier to another, in public or private?

Doug: Right. That's why IBM believes that openness, open building of cloud environments, using open standards, is very important. So that client is not boxed in and is completely flexible, in the future, in order to move applications back and forth. Be it in-house, external, private, public, they're going to need to keep that flexibility for the days ahead.

Michael: Rene Marquis of Novell noted that, in our roundtable discussion, that successful cloud adoption requires firms to have deeper skills than they might have previously had on staff. And I believe that was echoed by Mark Kovarski of the Bank of Montreal, in the same discussion. Have you seen this as well? That the customers who adopt cloud need to upscale their staff?

Doug: I think the answer if different depending on whether the client is building the cloud for their own use, in other words, a private cloud or a public cloud. First, regardless of that situation, private or public, clients are going to need to build deeper skills in terms of Service Management. Because they really a mode of focusing their efforts and their skills in terms of delivering service to the end user and back to the business.

So they get away from technology, in a way; however, if you're deploying a product cloud, there are certain areas where they are going to need to develop some deeper technical skills as well. Service Management would be one. Service Management, ITIL, that's an area that needs to become a lot more mature if you're building your own product cloud, for example.

Processes need to be clear, concise, documented, automated, and mature technologies used in a cloud, in order to manage Service Management very quickly.

In a cloud environment, things happen very quickly. You cannot take two or three weeks to determine if you need more capacity in a memory device, in a storage device. It happens in seconds. And so you need the technology, and the processes in behind the scenes, so those things are accounted for in seconds not days or weeks.

Michael: And I think that underscores a point that I hope we preserved, from earlier in the conversation, about the difference between deploying technology as an infrastructure, cloud as an infrastructure solution, versus as an application solution.

Doug: Yes.

Michael: I'm sure the further you get down that application line, the more important Service Management and effective processes become to make sure that they're being driven by the business. And not just putting a different set of handcuffs on.

Doug: Exactly. Exactly.

Michael: Well, thanks. If you do need deeper, better skills, particularly in the area of Service Management and processes, where do organizations look to find these skills? Where do they hire these skills from? Where do they look for those?

Doug: There are a lot of skills on the marketplace already with Service Management. The only difference is the existing skills need to become deeper and much more in tune with the modern Service Management technologies that vendors have deployed today. So I think every organization has Service Management skills today. It's just that it needs to be taken to the next level.

So it's not that you have to throw out the skills that you have. It's deepening the skills that you have.

Michael: So when a customer calls on IBM to help make this transition happen, what do you do to ensure your clients benefit from skills transfer? How do you hand off the knowledge the customers need to be successful on an ongoing basis?

Doug: And again, I think that question is relevant to a private cloud environment. Because, in public cloud, you're just consuming a service and it doesn't really get into a skills gap issue. But, in a private cloud, that Service Management layer is so key. A lot of times, when we're putting in a private cloud, we're not throwing out what the customer has. They may already have a virtualized environment, or a partially virtualized environment.

It's about adding some automation to that. And it's about adding some mature Service Management to that.

So, when we deploy and we're helping customers build a private cloud, we're usually implementing some technology, providing some services around that, to take what they've got today, and build it into a private cloud.

And, during the course of that engagement with them, we're obviously handing off skills transfer and knowledge transfer to the client. So that, when we leave, they're able to operate the environment on their own.

Michael: Well, I'm glad you mentioned that. Because, in our roundtable discussion, you said that, often the business case around cloud isn't that complicated, because it's an extension of what you've already invested in. I guess that's what you meant, right? Was if you find a customer that has an infrastructure that's amenable to this, that you could help them add processes.

Doug: In many times, you can take exactly what the customer and it's not, ship that stuff out, ship that stuff in. It's really taking what they've got today and adding things to it in order to build it into a cloud environment. So it's not a forklift replacement; although, there are options, and IBM has options, in order to physically actually ship a box, a cloud in a box, to the customer's loading dock. And they've got a cloud.

Michael: Really? So like a container-based solution?

Doug: Almost like a pod, with a completely deployed technology, built, running. Now it's a matter of customizing that environment. However, many clients don't need to go that way, because they've already invested in servers, and storage, and technology, and their skills. It's a matter of just moving that along the journey towards being deployed as a cloud.

Michael: Doug, thanks so much.

Doug: Hey, my pleasure.

Michael: This has been all about cloud, with Doug Jones, IBM Canada's Cloud Computing Business Unit Executive. On behalf of the IT in Canada Network, I'm Michael O'Neil. Thank you for joining us.