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IT COMPASS

Three questions for the man who coined the term “cloud computing”

All the way back in 1997, Ramnath K. Chellappa established what is widely considered the first academic definition of cloud computing, which he described as: “a computing paradigm where the boundaries of computing will be determined by economic rationale rather than technical limits.” Now an associate professor at Emory University’s Goizueta Business School in Atlanta, Georgia, he explains that the name cloud computing came from the new model’s nebulous nature. Given the fuzzy nature of the way that this concept is being implemented on the market, he has certainly been proven right.

How did your definition of cloud computing come about?

It occurred to me that as standards (particularly of communication) were evolving, literally any two devices could end up communicating with each other. Around 1995 or so this was esoteric but it’s what we see today with smartphones and other forms of computing. So the question was: Who or what decides what and/or where computing will happen?

In the client/server environment, we said: “I will have the graphical interface on my client and the server will do the actual processing. Therefore, my application sits in one place, and so on.”

I came up with this notion of “cloud computing,” because I believed that the emerging model was very nebulous in terms of what the boundaries are and where things will actually happen.

It is also nebulous in terms of where the user will actually be, and whether a user is always a user or whether a user is even a provider. If you think about MySpace and Facebook and user-generated content, you see that content is also a form of service. You are consuming your friend’s service – who is putting up his or her photos, etc.

Are you still keeping an eye on the developments?

Oh yes. I’ve always had this view that the ultimate form of computing is when a solution set is put together for me on-demand, instantaneously, dynamically. It doesn’t matter where it comes from, who made it, who wrote which part of the code. We are still not there, but in theory we could envision that.

Now the question is: How can I trust this particular piece of code that is looking into my data – which is perhaps proprietary – to put together what I need?

How do we know that (in a more benign fashion) it is not going to mess up my data? How can it trust it to run correctly?

More importantly (as we go towards a more malign form of computing), a lot of things come up – sharing data, propriety trust, various mandation and compliance issues, etc.

If I put on my economist’s hat, I see a trade off between usability and security. They are not mutually exclusive, but there is a trade off, and pricing can play a role.

Maybe I want the ultimate level of trust and security, so a trusted third party verifies every single instance of processing for me – and I am willing to pay a higher price.

Do you see claims being made in the name of cloud computing that you think are way off the mark?

What is way off the mark is that everybody claims that their model is THE cloud computing model. That, I find pretty bizarre! In reality, we are seeing a number of different ways in which this is actually working.

People are arguing: “Is software as a service part of cloud computing or not?” These things only come into play when you start defining cloud computing in a very technical fashion and have a checklist to see if it satisfies X, Y, Z things.

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