



Podcast interview with Willy Chiu

Google and IBM Initiative for Computer Students



TEJADA: Hello, I'm Marissa Tejada for IBM, and you're listening to an IBM podcast. My guest today is Willy Chiu, Vice President of High Performance On Demand Solutions for IBM's Software Group.

We're here in Silicon Valley today to talk about an initiative IBM and Google are taking to help students and researchers address the next phase of Internet growth.

The challenges before them lie with an emerging trend known as Internet-scale computing. Now, Willy, this is also called cloud computing, right?

CHIU: Yes. Internet-scale computing is sometimes known as cloud computing. The cloud computing really refers to the ability to unleash the power of thousands and thousands of servers in the Internet.

The way it came about is the ability to use the Internet, the Web, as a computing platform. So new types of applications such as search, such as social networking, could be accessible.

And you could be on a mobile device, you could be at home, you could be on a desktop, or at work. You could access these types of services without the knowledge of where these services are being provided.

TEJADA: Let's look at the bigger picture now. Why is this significant?

CHIU: Well, this is really very significant because of the growth and the driving, the demands of computing resources. The traditional way of running one application



on one server is not going to work if you're going to, you know, support this type of demand.

So what we are looking for now is provide a parallel computing model that will take the application and break it down into little chunks, many thousands of chunks, and then they can run all on these thousands of servers simultaneously.

Just imagine the user that is on a mobile device is requesting a search of finding some of the information that's on the Internet and can get an instantaneous response. And the reason you can do that is with these types of new computing models.

TEJADA: You gave us some great background on this so far. Now, with all of that in mind, let's talk about the Google/IBM initiative.

CHIU: Today we're announcing a joint initiative with Google to provide new methods and open standards that will promote the creation of massively parallel applications that will help drive the growth of the Internet.

We have been working together with a number of universities such as the University of Washington, Carnegie Mellon University, M.I.T., Stanford University, University of Maryland, as well as University of California Berkeley.

And what we are doing is providing resources and instructional materials such as something that we have created with open source using Eclipse so that they can teach these types of classes to these students, bringing new skills to the students so they can create the new types of software programs that will provide the kinds of growth that the Internet is looking for.

TEJADA: For the project it looks like the students will be able to access a pretty large cluster of computers. Tell me more about what this lab is built on.

CHIU: Well, this lab is built on a number of servers including IBM's BladeCenter, IBM System x and Google servers. On top of these servers running open source software such as Fedora Linux, XEN virtualization, and an open source version called Apache Hadoop, which is Google's MapReduce software.

What's most critical is how do we manage these types of servers, and we're using Tivoli management software, brought together with WebSphere, DB2 to automatically manage these large cluster of servers inside the cloud.

TEJADA: So what's the story behind why IBM and Google are collaborating on this?



CHIU: IBM and Google share the common vision and commitment to open source, open standards. We bring complementary expertise. Google brings its Web computing, massive scaling, number of servers; and IBM brings its business and scientific experience.

In addition, the virtualized infrastructure for large data centers is built on top of building blocks such as SOA and the Tivoli management software that we discussed earlier as well as WebSphere and DB2.

TEJADA: All right, one more question. What's the impact of this initiative? What can we expect from Google and IBM working together on this?

CHIU: IBM and Google working together to promote this new computing model as an open standard, in addition we're accelerating the creation of new skills in the universities by providing them with resources as well as software tools and methods that are based on open standards with the hope of having these types of applications and skills that will help drive the growth of the next generation of the Internet and getting broad usage across the whole industry.

TEJADA: I'd like to thank my guest, Willy Chiu, for joining me today. You've been listening to an IBM podcast.



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