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MICROSOFT:
EVERYTHING BUT
THE KITCHEN SINK

BRIAN MADDEN:
THE TRANS-
FORMATION OF
AN IT GUY

BOB PLANKERS:
IT'LL ALL BE
SOFTWARE SOON

CLOUD COMPUTING: IF YOU CAN'T BEAT 'EM, JOIN 'EM

*IT teams are falling
behind in the cloud adoption
game—and that's bad
for business.*

OCT. 2012


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Currents

Home

Editor's
Letter

Currents

Brian Madden:
The Trans-
formation of
an IT Guy

Bob Plankers:
It'll All Be
Software Soon

Steve Gunderson:
From the Front
Lines

Cloud
Computing: If
You Can't Beat
'Em, Join 'Em

VDI
Performance
Still Falls
Short of PCs

Microsoft:
Everything
But the
Kitchen Sink

Jonathan
Eunice: Are
We There
Yet?

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ONE ON ONE

The Cloud Standards War Is On

AS CLOUD COMPUTING lurches toward greater maturity, issues such as common standards and interoperability remain hurdles—even for users encouraged by the cloud's promise of better infrastructure management and reduced costs.

In this One on One interview, we sat down with **Randy Bias**, co-founder and chief technology officer of [Cloudscaling](#), an open source cloud infrastructure provider, to talk about the lack of standards among cloud providers and how today's patchwork will ultimately give way to a more uniform cloud universe.

Many major cloud providers have application programming interfaces that aren't compatible with others' APIs. Will this change?

What I've seen is that infrastructure that is important to the business ultimately drives toward standards and APIs and homogeneity, simply because without those things, it's difficult to create a plethora of standards and APIs higher up the stack.

Which of the cloud players might win the battle for dominance?

You can complain about whether Amazon or VMware is the right model, but we can say with great assurance that they both dominate their respective parts of the market, and that is driving a certain amount of customer perceptions.

Still, some people feel uncomfortable with [this] dominance ... and they have to make a case for there being other standards, platforms and APIs. But with 90% of public cloud capacity being on Amazon and 90% of enterprise virtualization clouds being on VMware, it's hard for me to believe that another standard is going to come out and clock those—that just doesn't make sense.

Is it a problem that public and private cloud providers' APIs haven't been compatible with one another?

There are two different architectural approaches. The VMware pattern is what we call *enterprise virtualization clouds*, which is the ability to take existing enterprise stovepipes—all the little silos of different hardware, software and network and storage architectures—and just recreating them and virtualizing them. But [with that approach], you don't get the economies of scale.

Home

Editor's
Letter

Currents

Brian Madden:
The Trans-
formation of
an IT Guy

Bob Plankers:
It'll All Be
Software Soon

Steve Gunderson:
From the Front
Lines

Cloud
Computing: If
You Can't Beat
'Em, Join 'Em

VDI
Performance
Still Falls
Short of PCs

Microsoft:
Everything
But the
Kitchen Sink

Jonathan
Eunice: Are
We There
Yet?

So this kind of cloud has been driven by the need for greater server consolidation, greater utilization rates.

The Amazon approach is more reminiscent of what the Internet giants have been doing. Instead of building stovepipes, they build layer cakes, where they have a whole stack of services that support each other, from the concrete to the software. And then at the software layer, they have a whole bunch of applications that leverage that whole stack. We refer to this as an *elastic infrastructure cloud*. It caters to greater scalability for the apps and the infrastructure,

and it's not trying to manage lots of stovepipes but to make the applications reflect the underlying infrastructure.

How do these cloud models differ in practical terms?

There is a very big difference in the types of applications and workloads supported on each.

VMware customers have database servers like Oracle that are old and don't have any basic replication; they rely on the infrastructure to have high amounts of availability and

OVERHEARD | VMworld 2012 Edition

"We all owe a round of applause to Hyper-V 2012, because I think the competition in this space is really the reason that we're starting to see some licensing reform from VMware."

—DAN BRINKMANN, solutions architect at Lewan & Associates, on VMware's eliminating vRAM licensing

"Software-defined data centers are great, but we don't know what we don't know yet."

—KEITH NORBIE, VP at Nexus, a Stratos company, responding to Maritz's keynote

"It's not a post-PC world. The PC is alive and will be for a long time. It's a multi-device world."

—From VMware CTO STEVE HERROD's keynote speech

"Yes, this is an admission that we made things overly complex. Mea culpa."

—Outgoing VMware CEO PAUL MARITZ on the company's decision to roll back its vRAM licensing policy

"There are technical things I want to learn, but a lot of it is, how do you sell this to the business, how do you get them to want it as opposed to you telling them they need to use this—on the desktop side? From the server side, I think they get it."

—JAKE PAWLAK, IT architect at CNO Financial, talking about why he attended VMworld

"There's no place like 127.0.0.1."

—Spotted on an attendee's T-shirt

Home

Editor's
Letter

Currents

Brian Madden:
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formation of
an IT Guy

Bob Plankers:
It'll All Be
Software Soon

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From the Front
Lines

Cloud
Computing: If
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'Em, Join 'Em

VDI
Performance
Still Falls
Short of PCs

Microsoft:
Everything
But the
Kitchen Sink

Jonathan
Eunice: Are
We There
Yet?

that the application is designed to assume that the infrastructure never goes down.

We see a very different [experience] for



customers that adopt Amazon, like Netflix, and they are redesigning their applications for the underlying assumption that servers always go down, and it's just a question of when. So the question is, how do you design

your application to handle that?

There is a sea change of perception, where people now see the value of being able to scale applications horizontally, as the large platforms like Facebook have done.

Will companies coalesce around a common standard?

There is some amount of coalescing already. But customers are all over the place, frankly; it's still early days. And there is a disconnect between the understanding of these two fundamentally different patterns. Customers think they are recreating the Amazon environment when they create a VMware environment that allows you to turn on VMs on demand—except that it doesn't provide the scale, the elasticity. And they find out that it's not good enough for their application developers to be successful internally, who then continue to go to Amazon. People will continue to fail and, through the failures, learn the hard way.

The thing that we're really missing is a set of solution providers that can package

up and deliver an Amazon equivalent that is more than just an API.

What role, if any, does open source play in cloud standards?

With this particular disruption, open source, open standards are leading the charge. If you look at a lot of those guys who are really big—the Googles and Facebooks—all of their systems largely use open source—yes, for cost economics, but in many ways, it's a control-your-own-destiny thing.

Simultaneously, you're starting to see a backlash among enterprises that have been beholden to hardware and software vendors and are starting to get sick of being locked into these vendors and then getting milked. Enterprises are starting to see that open source is at a maturity level where they can embrace it.

How is the cloud different from its predecessors?

It's pretty much disrupting the de facto standard: the client/server and enterprise computing paradigm, which displaced the mainframe paradigm.

We've gone from a gigantic single iron box that everybody logs in to that runs one or a handful of applications to something that is more distributed, with shared responsibility between IT staff who run centralized servers and users running laptops or desktops, to an even more fully distributed model that is always on.

—LAUREN HORWITZ

FOR MORE on standards and the cloud, check out SearchCloudComputing.com.

“Cloud is pretty much disrupting the de facto standard.”