

Will Cloud Computing Provide Us with an Inflection Point that Rivals the Growth of the Internet?

Transcript of a BriefingsDirect Podcast on the potential growth of cloud computing and what companies must do to prepare themselves for moving to the cloud.

[Listen](#) to the podcast. [Download](#) the podcast. Find it on [iTunes/iPod](#) and [Podcast.com](#). Download the transcript. Learn more. Sponsor: [Hewlett Packard](#).

Dana Gardner: Hi, this is [Dana Gardner](#), principal analyst at [Interarbor Solutions](#), and you're listening to BriefingsDirect.



Today, we present a sponsored podcast discussion on the importance of performance monitoring and [governance](#) in any move to [cloud computing](#). Most analysts expect cloud computing to rapidly become a growing affair. That is, infrastructure, data, applications, and even management itself, originating as services from different [data centers](#), under different control, and perhaps different ownership.

What then becomes essential in moving to cloud is governance, and the use and characteristics of these services to manage the complexity and relationships in order to harvest the expected efficiencies and benefits that cloud computing portends.

To accomplish such visibility and governance at scale and in a way that meets enterprise IT and regulatory compliance needs, with a full spectrum of governance technologies, services, best practices, and hosting options guidance, we're joined by two executives from [Hewlett-Packard's \(HP's\) Software and Solutions Group](#).

Please welcome with me, [Scott Kupor](#), vice president and general manager of HP's [software as a service \(SaaS\)](#), Operations. We're also joined by [Anand Eswaran](#). He is the vice president of Professional Services. Welcome to you both.

Anand Eswaran: Glad to be here.

Scott Kupor: Great, thanks Dana.

Gardner: We can't begin any meaningful discussion about cloud without defining what we mean. We've had lots of different discussions. We've seen quite a variety of different expectation in the market. When HP talks about services and cloud and bringing some governance and manageability, what is the box that you tend to put around this term "cloud computing," Scott?

Kupor: We really think about cloud having a couple of components. Number one, using the public Internet to access services that may live either inside a corporate firewall or potentially outside a corporate firewall.



Secondly, a business model that allows you to pay as you go, to expand or decrease your usage of that application, as the business sees fit. There is a whole other thing, of course, from a technology perspective around virtualization and other components that go along with it, but when we talk about cloud, that's what we hear our customers discussing.

Gardner: Anand, from a professional services perspective, do you define cloud differently?

Eswaran: No, cloud is pretty much defined the same way. Scott said it all. The only thing I would add is that if I try to take a step back, I think of this as an evolution towards getting to the ultimate goal of offering "everything as a service" to the customer or to an organization.



In the context of that, cloud is going to be one of the principal enablers, where the customer or the organization can forget about technology so much, focus on their core business, and leverage the cloud to consume a service, which enables them to innovate in the core business in which they operate.

Gardner: Now, who within the organization typically would be concerned with cloud? I suppose if I'm an end user and I'm accessing an application, I might not care whether it's coming from a cloud or a traditional data center. But, within the IT hierarchy, who are the folks who are going to need to be concerned with this new phenomenon of cloud computing, Scott?

Running the gamut

Kupor: You hit on it exactly. The end user quite frankly shouldn't care, and doesn't have to care, about where that application sits. Within the IT organization, it really runs the gamut, all the way from individual systems administrators, all the way up through C-level executives.



This is partly from a technology perspective at the more day-to-day transactional level people care about, being able to manage service levels. How do I access that technology? But, at the more senior levels in companies, the big driving factors towards cloud -- which are ease of use, ease of adoption, lower cost, and things of that sort -- are very high end agendas today that we're hearing from most of our enterprise customers.

Gardner: Scott, when we talk about [Cloud Assure](#), is this something that's targeted to applications coming off the cloud, or are we looking at being able to look at the certification,

trust, and risk reduction across the full panoply of what we expect to come from third-party clouds?

Kupor: Yeah, it really covers the full gamut of things. You hear people use lots of terms today about [infrastructure-as-a-service \(IaaS\)](#), [platform-as-a-service \(PaaS\)](#), or SaaS. Our idea is that all these things ultimately are variants of cloud-based environments. Maybe I can illustrate with kind of a simple example.

Lots of customers are looking at things like [Amazon EC2](#) or [Microsoft's Azure](#) as environments in which they might want to deploy an application. When you use one of those infrastructure environments, essentially you're getting compute power on-demand from those providers.

But, when you put your application out there, you still care about, how that application is going to perform. Is it going to be secure? What does it look like from an overall management and governance perspective? That's where, in that specific example, Cloud Assure can be very helpful, because essentially it provides that trust, governance, and audit of that application in a cloud-based environment.

Gardner: I suppose from a purchasing perspective, you want to look at products, if you're implementing a private-cloud infrastructure, or the governance to manage across third-party or publicly facing clouds, as they're sometimes referred to. But, this seems as well to be a matter of people and process. So, who might be an organizational manager or decision maker who should be concerned about this, Anand?

Takes focus off maintenance

Eswaran: Building on what Scott said, I would just add one context here. If you look at today's IT environments, we hear of 79-85 percent of costs being spent on managing current applications versus the focus on innovation. What cloud does is basically take away the focus on maintenance and on just keeping the lights on.

When you view it from that perspective, the people who are bothered about, worried about, or excited about the cloud span the whole gamut. It goes from the CIO, who is looking at it from value -- how can I create value for my business and get back to innovation to make IT a differentiator for the business -- all the way down to people in the IT organization. These are the apps leaders, the operations leaders, the enterprise architects, all of them viewing the cloud as a key way to transform their core job responsibilities from keeping the lights on to innovation.

It spans the whole gamut. Each person brings a different perspective and focus, but this is one of those interesting phenomena, which actually cuts across the entire IT organization.

Gardner: What about outside the IT organization? If I'm a business leader and I'm also looking to transform my business, I'm looking for agility and an opportunity for IT to react to my needs and marketplace changes more rapidly. Should they be thinking about cloud?

Eswaran: Absolutely. Once the IT organization is free to think about innovation, to think about what cutting edge services can they provide to the business, the focus then transforms from "how can I use technology to keep the lights on," to "how can I use technology to be a market differentiator, to allow my organization to compete better in the marketplace."

So given that, now the business user is going to see a lot better response times, and they are going to see a lot of proactive IT participation, allowing them to effectively manage their business better. The whole focus shifts, and that is the key. At the heart of it, this allows organizations to compete in the marketplace better.

Kupor: This is really what's interesting to us about cloud. We're seeing demand for cloud being driven by line-of-business owners today. You have a lot of line-of-business owners who are saying, "I need to roll out a new application, but I know that my corporate IT is constrained by either headcount constraints or other things in this environment, in particular."

We're seeing a lot of experimentation, particularly with a lot of our enterprise customers, from line-of-business owners essentially looking towards public clouds as a way for them to accelerate, to Anand's point, innovation and adoption of potentially new applications that might have otherwise taken too long or not been prioritized appropriately by the internal IT departments.

Gardner: We've set some fairly high expectations for cloud computing, from the business side and the IT side -- agility, costs, and flexibility. Now, we're down to the fine print, to the terms and conditions. How do we get there? What are the problems that typical users that you're talking to encountering as they say, "How do we get going?" Scott?

Fear of losing control

Kupor: The thing that people are worried about from an IT perspective in cloud is that they've lost some element of control over the application. In a traditional deployment, that application sits inside a corporate data center inside a firewall. I can touch and feel the application, and all the performance, availability, and security things that I care about are within the domain of what I can see and feel.

In cloud now, what you've done is you've disintermediated the IT administrator from the application itself by having him access that environment publicly. They're the same types of things that he used to care about internally, but now he has to worry about brokering a relationship between his own organization and the other third-party cloud provider whose environment he is accessing.

Things like performance now become critically important, as well as availability of the application, security, and how I manage data associated with those applications. None of those is a new problem. Those are all same problems that existed inside the firewall, but now we've complicated that relationship by introducing a third-party with whom the actual infrastructure for the application tends to reside.

Gardner: So, we're down to governance. How do I govern and manage? How do I provide insight into what is occurring with cloud, versus what was occurring inside, comparing and contrasting how valuable the cloud approach or solution might be to an internal one?

Anand, help us understand better what this problem set is from organizational culture shifting people's thinking around how to access IT.

Eswaran: The heart of that problem is that you used to be able to create and manage private applications for your line of business. What the cloud does is get you back to thinking about a shared service for the entire organization. Whether you think of shared service at an organizational level, which is where you start thinking about elements like the private cloud, or you think about shared applications, which are offered as a service in a publicly available domain including the cloud, it just starts to create exactly the word Scott used, a sense of disintermediation and a loss of control.

The other thing that I think most organizations start thinking about is also data and information, because the cloud is on an evolution path right now, which also means that people are quite unsure about who are the mature cloud vendors and who are going to be offering the mature cloud services and applications. Who is here to stay? What does it mean if one of the cloud vendors or partners they work with is going to go out of business? How are they going to transfer and transition all their applications and data to a different cloud vendor or partner?

They want to make sure that it doesn't get to a point where adopting a technology, that makes sense or adopting a service that makes sense doesn't come back and cause more pain and cause a downturn that they haven't thought about right now.

Gardner: Scott, this sounds a little bit like a certification for trust process. We went through something like that several years ago when open-source software started coming into vogue and people were using it. Do you think we'll go through a similar process with the move towards cloud?

Similar evolution

Kupor: I absolutely think that's the case, and I think your open-source example is a very good one. New vendors came into the open-source space and said, "We bless this version of the

software. We'll support it. We'll make sure it works appropriately." We think there's going to be a similar evolution in the management space for cloud-based environment.

Whether I'm deploying in a Microsoft environment or an Amazon environment, what I want to know, as an end user, is how do I holistically manage that service level to make sure that application is up and running, secure, and all the things that I care about?

Your point is a very good one. We need to figure out how we create that level of governance around the application and how we ensure security and availability independent of the environment in which that application sits.

Eswaran: Scott, that's at the heart of HP Cloud Assure, so maybe it's worthwhile for you to talk about the first steps that we've taken as HP, which drives to the heart of the problem Dana just talked about.

Kupor: That's a really good point. HP Software has traditionally been a management vendor. Historically, most of our customers have been managing applications that live inside the firewall. They care about things like performance availability and systems management.

What we've done with Cloud Assure is we've taken all of that knowledge and expertise that we've been working on for companies inside the firewall and have given those companies an opportunity to effectively point that expertise at an application that now lives in a third-party cloud environment.

So the three main components that we've heard from our customers that they worry about are: If I deploy an application in an external cloud environment, will that application perform at the level that I care about? When my end users hit that application, is it going to give them again the kind of data and integrity that they're worried about? Then, is the application itself secure?

What Cloud Assure does is allow them to, as a service, point that set of tests against an application they're running in an external environment and ensure the service levels associated with that application, just as they would do if that application were running inside their firewall. It gives them that holistic service-level management, independent of the physical environment, whether it's a cloud or non-cloud the application is running in.

Gardner: Anand, you had some recent news about taking this towards skills, understanding, and the ability to implement these processes. You want to get your financial return on moving to the cloud, but you don't want to get bitten by unforeseen risk. Tell us a little bit about how a professional-services value can help mitigate that.

Taking a step back

Eswaran: We were actually taking a step back. Scott talked about helping customers who have already made the decision to get in the cloud, but are worried about a few things in terms of security, performance, availability, governance. What can you do about it? What we are doing from a professional-services standpoint is taking a step back.

The first thing is, as we went through the different customers we already worked with, we got a lot of questions on what the cloud means, the point you started this conversation with. People are still struggling to touch and feel what it means. So, the first step of what we're doing as a services organization is educating the customers.

The first portfolio offering is a workshop to educate the customers and to help them understand what the cloud means, what has the evolution of the cloud been to get from where it was to where it is today? What are the different ramifications of the cloud? What are viewed as possible bottlenecks or things to be concerned about and watched when you think about the cloud?

Based on the fact that HP is a thought leader, if you think about the elements of the cloud in terms of hardware and SaaS applications all coming together, HP is the absolute market leader in having the full spectrum of things that need to come together to offer a viable cloud service.

So, we want to use our thought leadership to not just talk about the past and where we are today, but to talk about gazing at the crystal ball, where do we think the cloud is going to go? Do we think its real? What do we think are the different manifestations that will come about in the cloud? Helping the customers get educated about it is the first step.

The second step, from a service offering perspective, is a planning session. We sit down with the customers, and, at that point, it's not just about the cloud and the services which comes about the cloud, but about the maturity level of the customer and the risk profile of the customer. Are they an early adopter? Are they people who want to see a service or a technology element mature before they adopt it? Where are they in that maturity cycle?

Based on our understanding of their infrastructure, processes, applications, the IT organization, their risk profile, and our understanding of where the cloud will go, can we create a roadmap for them -- whether it's a six-month roadmap or a three-year roadmap -- on what it means for them to adopt the cloud?

What components does it make sense to create a private cloud for? What components does it make sense to jump on and leverage the services available in the public cloud? What components should they still be doing as they do today? The second step is a workshop to create a plan and a roadmap for them, based on an assessment of where they are in their maturity cycle and where they have been in the organization.

The third step, finally is, if it makes sense, help them execute the roadmap. The key underlying tenet of this is that we don't want customers to think that they are pressured to move onto the cloud right now. This is an instance where we want to listen to them, bring our expertise in thought leadership, and create a roadmap based on our thought leadership and their profile.

This is an evolution

Kupor: That's a critical point. You used the term "evolution." If you read the popular press and the media today, there's plenty of talk about cloud and hype. One of the things that's really important, what we hear from our customers, and certainly the viewpoint that HP is taking towards the market is, we do think this is an evolution.

We don't expect customers to throw out existing implementations of successfully developed and run applications. What we do think that will happen over time is that we will live in kind of this mixed environment. So, just as today customers still have mainframe environments that have been around for many years, as well as client-server deployments, we think we will see cloud application start to migrate over time, but ultimately live in the concept of mixed environments.

Also, to your point earlier, this creates a new management challenge for companies, because they have to deal with legacy environments that are traditional in-house environments, and, at the same time, they're actually starting to roll out applications in the cloud.

Gardner: It seems important also to set expectations properly. Through HP Cloud Assure and through your Professional Services and workshops what are you telling people about what they should meaningfully expect from this -- how much of a silver bullet or how much of a modest, but impactful, improvement?

Eswaran: Good question, Dana. We've seen a lot of these technologies come and go. [Open source](#) is gaining in momentum. [Client-server](#) is on its way down. From an opinion point of view, we expect cloud to be a very big inflection point in technology. We think it's powerful enough to probably be the second, after what we saw with the Internet as an inflection point.

This is not just one more technology fad, according to us. We've talked about one concept, which is going to be the biggest business driver. It's utility-based computing, which is the ability for organizations to pay based on demand for computing resources, much like you pay for the utility industry.

The ability to create shared and distributed services enabled that. You have the ability to focus on your core business and not worry about the amount of focus, money, and energy you spend on the existing technologies in an IT organization. So, at the heart of it, we believe this is a huge inflection point, which will get us out there.

In line with that, Scott, do you have any perspectives from an infrastructure perspective? How do you think this is going to get us to the next level?

Appropriate expectations

Kupor: We want to set expectations appropriately. If you look at expenditures today on cloud-based environments, they're still very small in terms of overall IT spend. It's probably single-digit type dollars we're talking about as a percentage of overall IT spend.

What we believe, and if you look at the analyst community and what we're hearing from our enterprise customers is, over the next five years, cloud spend will certainly be closer to something like 25 or 30 percent of overall IT spend. We think that's a pretty reasonable indication of the kind of opportunity that cloud provides.

But, we do need to be careful. We in the industry need to make sure that we don't hype this to the point where we set the wrong expectations with customers. This is going to have to be a measured and managed approach. Customers will deploy applications on an incremental basis, as it makes sense to go into the cloud, and not wholesale throw out things that have been successful for their environment.

Eswaran: So, at the heart of it, it's not just what outcomes you achieve in terms of savings. You actually can get to a more scalable and flexible and adaptable model, but you don't have excess capacity, whether it's hardware, software, or licenses. You actually are able to get your organization to a point where you pay for what you consume.

Your real need for capacity is a very difficult exercise from a planning standpoint. Whether it's different components of the IT organization you're buying today, you're forecasting growth, you're forecasting expense, and you're forecasting capacity. This allows you to just forget about all of that and worry about consuming services based on demand. That's at the heart of what this gets us to.

Gardner: Clearly, folks need to consider education and getting prepared as they move towards this. But, I suppose there are also a lot of questions. I'm getting them. Where do we start first in terms of areas of applications or function? Is this a data problem? Where do we help people begin this process, perhaps the crawl before they walk and run? Scott?

Kupor: What we're suggesting is that people should be very pragmatic. One of the silver linings of the difficult financial environment that we're all struggling through is that this gives us an opportunity to look at the costs associated with maintenance of applications, as opposed to actual innovation.

To Anand's point, what we ought to do is selectively look at applications and ask how much it costs to run that, maintain it, and develop it in-house, including both labor and infrastructure

costs. Then, we ought to do that comparison with whether you could save money and achieve the same level of quality and performance by deploying that application in the cloud?

That's how we think customers, particularly in this environment, will approach it. We also think that we can add a lot of expertise with our services organization, but it's really going to be a financially driven and a performance driven move of these applications.

Quality and testing

Eswaran: Let me expand that. Let me give a couple of examples, simple things to think about. Quality and testing is at the heart of what you need to think about from an IT organization standpoint, quality in everything you do across the stack -- applications, process, networks, routers, everything you do.

A natively simple application we're rolling out, which can be consumed over the cloud, is testing as a service. It will allow you now to standardize your entire portfolio and not worry about which tool and how you're going to go about doing it, but just worry about the outcome of getting to a certain level of quality by leveraging testing-as-a-service, which comes in from HP.

For us, it internally leverages our entire stack, the fact that we've been doing testing as a service from a SaaS standpoint for a long time, the fact that we have thought leadership from a professional services standpoint, and the fact that we have capacity from an [EDS](#) standpoint. We leverage all of that to bring unified service, delivered over the cloud, for a customer.

That's what we're trying to get to. In the near future, we're going to be rolling out specific services, which readily use the cloud to create a business outcome for the customer.

Gardner: Looking to the future briefly, before we close out, it seems that in order to take advantage of this across multiple clouds, a significant amount of neutrality and standardization is important. If you want to be able to test and use different tools or move applications and data around, it seems to require someone in the middle to arbitrate neutrality and openness. Do you see that, Scott, as part of what Cloud Assure can offer?

Kupor: Absolutely. I think the simplest historical analogy is that this is exactly what happened in the overall systems and network-management market many years ago. You had lots of individual vendor-based solutions for managing a particular environment, and those always exist and will live, but the real winners in that space -- HP obviously among them -- were the players who took a neutral stance, whether it was towards operating system support, hardware device support, or network support.

We think we'll see the same thing in the cloud environment, which is what you want is a vendor who is neutral from an infrastructure perspective, who is going to equally support a platform that

might be run by any number of third parties, and who's going to basically give you that assurance that you can manage service levels holistically and consistently.

Whether you're running in a private cloud, a public cloud, or inside your data center wall, it allows you that potential mobility of applications. So, if you find better, cheaper, and faster ways to deploy that application, you can move that application without having to worry about starting from scratch. So, absolutely vendor neutrality and a concept of trust and governance are going to be the big driving factors for adoption.

Gardner: Anand, from that perspective of planning your move to cloud with a lot of neutrality or portability in mind, it seems to me that would allow you to recover your economic benefits. What do you project for people in terms of their positioning around neutrality?

Eswaran: From a consulting standpoint, we almost view ourselves as the Switzerland of cloud, where we don't have a vested interest in any particular technology. We obviously have a lot of products and applications that enable a service to be created for the customer from an HP standpoint, but the way we have always approached consulting in the HP domain is that we work with the technology investments a customer already has.

For cloud, we help them figure out the best sourcing model for them to create the best value from an efficiency standpoint, whether that is an on-premise hosted application or whether that is creation of a private cloud to create a shared service within the organization. Having gone through the analysis of the infrastructure and the applications and everything they do within the IT organization, we give them our recommendation on what should be leveraged from the cloud to create better efficiencies.

Our goal is to make sure that we enable the customers to make the best business decision for them, which will enable them to get to the long-term or within view of the long-term..

Gardner: We've been discussing the future benefits and expectations around cloud computing, steps that you can take in the meantime as you pursue and educate yourselves on the opportunities for cloud from a business, technical, operations, and cost savings perspective. Also, we've discussed how to move forward as a crawl-walk-run process with Cloud Assure from HP and other services that they're delivering across an application life cycle spectrum.

We appreciate the input from two executives from Hewlett-Packard's Software and Solutions Group. We've been joined by Scott Kupor, vice president and general manager of SaaS offerings at HP, and also, Anand Eswaran, vice president of Professional Services. Thanks guys.

Eswaran: Pleasure was mine.

Kupor: Thank you Dana.

Gardner: This is Dana Gardner, principal analyst at Interarbor Solutions. You've been listening to a sponsored BriefingsDirect podcast. Thanks, and come back next time.

[Listen](#) to the podcast. [Download](#) the podcast. Find it on [iTunes/iPod](#) and [Podcast.com](#). Download the transcript. Learn more. Sponsor: [Hewlett Packard](#).

Transcript of a BriefingsDirect Podcast on the potential growth of cloud computing and what companies must do to prepare themselves for moving to the cloud. Copyright Interarbor Solutions, LLC, 2005-2009. All rights reserved.