



The Deloitte On Cloud Podcast

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Title: These three factors can help you manage your cloud environment better

Description: Cloud can be a force multiplier and bring value to the business, but management challenges remain. In this episode, David Linthicum talks with Ron Batra, digital transformation and business value director at PagerDuty, about how to improve cloud management. They discuss using automation to separate the signal from the noise, reducing multi-cloud complexity, and leveraging industry clouds to enhance core competencies. Ron also offers his perspective on how innovation will power cloud's future.

Duration: 00:28:27

David Linthicum:

Welcome back to the On Cloud podcast. Today on the show I'm joined by Ron Batra, digital transformation and business value director at PagerDuty. Ron, welcome to the show.

Ron Batra:

Hello, Dave. How are you doing? It's very good to be back on the show with you.

David Linthicum:

Yeah, we just met in person again a few weeks ago at the InnoTech show. I was doing a keynote out there, and I saw Ron at one of the receptions, and it was great to catch up and see what's going on. It's funny, there's a small world. There's probably about 50 people that you all keep working with no matter what. Everybody changes companies and moves in different industries and things like that, but you still keep in touch with the same people. Have you found that?

Ron Batra:

Yes, there is so much truth to that, David. It was great to meet you, and then I also realized as we were talking about cloud trends and technologies, the people who shape this change companies. For example, when we talked last time, I was focused more on IoT and edge computing, and those are still passion areas of mine, but since then I've moved on from cloud networking and cloud infrastructure on to the SaaS space, and this is my second job in the SaaS space after we did our last podcast, which I think was more than four years ago.

David Linthicum:

Yeah, I think it was more than four years ago. I'm glad to have you back on. So, tell us about yourself, Ron. How did you come—just kind of quick highlights of your career and talk about your journey as it's gone through different technologies, things like that, and working for different companies and what you've been focused on and how your interests have changed and evolved over time.

Ron Batra:

So, I've been in the industry for over 25 years, and that makes me really young, but I have some experiences to share. I used to be a database and ERP type of a practitioner, and I used to do a lot of heavy database work and then ERP transformation, business transformation, supply chain finance, that kind of stuff. And then around 2008 and '09, I got intrigued by what was happening in the cloud, and I went onto the build side of the house for a major telecom, and we basically launched platform-as-a-service and infrastructure-as-a-service. At that time, the conversation in 2009 was more about CapEx, OpEx. We were just scratching the surface of what innovation in the cloud could bring about.

And as it happened, ultimately, I followed the data bits, if you will, and I followed the data traffic. And then I realized that the cloud aggregation was happening in companies which were basically providing internet connections. So, I did a stint in about three or four years in a company which specialized in cloud interconnection. And by that time, I thought I had gotten my fill of infrastructure-as-a-service, platform-as-a-service, and cloud interconnection, and I decided to take myself to the SaaS space.

So, I worked for a major SaaS company, which is a leader in service management. I worked for them for about three, four years, and I joined PagerDuty about a year and a half ago where my focus is basically helping our customers with their digital transformations and justifying the investments they make in our platform. So, that includes everything from looking at the enterprise architecture to where a digital transformation journey could take them, how they would consolidate certain platforms, how a multi-cloud architecture is set up, what are some of the digital apps, and that's what I do at PagerDuty today, Dave.

David Linthicum:

So, what is PagerDuty? What kind of technology do you guys sell into the marketplace and what do you do specifically to help people become successful with the technology?

Ron Batra:

So, we are an operations cloud SaaS company, and what we really do is we automatically detect and diagnose disrupting events. Our platform mobilizes the right team members to respond, and then, ultimately, what we do is we automate infrastructure and workflows across the digital operations landscape. We were founded by three engineers in 2009 who realized that the traditional ITAM and ITSM solutions were not a fit for the cloud. So, that's how the company was formed. And the company has evolved since then. So imagine you're listening to some music, you're watching a movie, you're exercising on a fitness device, you're doing some physical exercise, and your bike is connected to other bikes. All kinds of connected things there as well as cars and automobiles. We have a footprint in all of those digital environments.

David Linthicum:

It's really kind of synergistic of what we've been talking about on this podcast for a long period of time. The ability, as people are going to digital transformation and they're enabling cloud computing, they're finding they're getting to very complex architectural deployments, multi-cloud, more than one public cloud and private cloud and IoT devices, and also the legacy stuff still has to run. Your ability to kind of manage those things at scale really is the challenge in 2023 and 2024. So, it's not just putting together these architectures, which I think is part of the deal. We have to put some forethought into how we configure technology to get the most value back to the business. But your ability to operationalize these things at scale, leveraging technology and tools, that doesn't necessarily break the bank, or throw three times as many resources at the problem is really kind of the trick to solve this year and next year. Would you agree?

Ron Batra:

You hit the nail on the head, Dave. That is exactly how our customers are using us because they want to scale their digital up, they want to scale their businesses, they want to go from 1 million subscribers to 5 million, or wherever they're on the journey from, 10 million to 200 million. The whole point of a business model is lost if you're adding headcount linearly. So, for every growth in the business, every dollar the business grows, they don't want to be putting unnecessary money into tooling. So, the tools that provide operational support have to scale, and the scaling is done through automation, is done

through root cause analysis, is done through process automation as well as AIOps types of automations, and that's how the product scales and our customers scale with minimum human intervention.

David Linthicum:

Yeah, so, the matter of managing the resources and getting the most value back for the resources that you're spending, or you're putting on these projects, I think, that's key to this. You've got to remember that if we're running a business, that every resource we put on something to solve a particular problem, in this case complexity, and highly complex distributed workloads, is going to remove resources from doing other things like becoming innovative and creative in the marketplace to create kind of net new technology that's going to get us into a market that we're looking to get into. So, it's really kind of how you're placing the bets. And I was always afraid when the complexity started to show up a few years ago people were just going to throw money at the problem, and some people do.

But, ultimately, this is a matter of becoming smarter, able to leverage the technology as a true force multiplier, get into the space, and that's how you win the game. It's just very tough to figure out how to do that because I don't think there's a lot of people running around the planet that understand how to configure technology in such a way where you're able to reduce the complexity impact of operationally scaling these highly distributed, highly complex, highly complicated systems. So, what are your customers seeing today? I'd love to talk about people who are solutions-focused as to what they're seeing, what anecdotal information's coming back from you as you're in the field and communicating with people who are dealing with this problem now.

Ron Batra:

So, I think the first thing is, David, the complexity you mentioned, you're right on because our customers have workloads in multi-clouds, but more importantly, the newer generation of applications has evolved a lot from the old, I would say, on-prem or data-center-in-the-company type of applications. In those days, you used to have one or two giant monolithic applications and then two or three interfaces, maybe. There used to be payroll interface so that people who get paid. And there used to be a shipping interface, and there would be a small team that would just make sure, "Hey, when we're doing the upgrade, just make sure the interfaces work fine." Now the tapestry has changed quite a bit. What we have is microservices, we have containers, we have different data collections, we have logs, we have file systems. Systems have become very, very noisy, so the digital landscape, I would say the classical signal-to-noise ratio, it's very easy in the digital landscape to get overrun by the noise.

So, one of the things that our customers really want us to do is separate the signal from the noise. So, for every million events that happen, if those million events result in a million tickets, then the battle is lost. So, using that anecdote at a very high level, a million tickets, if that results in 1,000 tickets, imagine a funnel and at the one end of the funnel you have 1 million events, and then on the right side of the funnel you have maybe 1,000 actionable items that came out. And let's forget about the time period—it can be hours, it can be days. That's not so much relevant, but what is relevant is that our customers want us to shrink the noise.

They want us to automate everything that can be done before it becomes an incident and now people have to have a trouble ticket to respond to. So, in this landscape, what is happening is that people don't want toil. People want to get away from toil. They want to do high-level work. DevOps teams, Ops teams, SREs, they don't want to be chasing down, "Oh, I had an issue, let me go figure out why the app failed," and then everybody in the room coming, 50 people in a room, responders coming into a room, and then everybody's trying to do root analysis the old-fashioned way through punch cards and tribal knowledge. So, we have about 700 integrations out of the box today, and APIs at work across the landscape. And what we help do is that those 50 people in a room situation I described, imagine only five people coming into the room and focusing on what the root cause issue was, whether it's a major incident or a minor incident.

So, that's how our customers use us, Dave, but what also happened in the last decade or so was that, as the cloud evolved, the whole industry realized that there was not enough tooling and products to fulfill everything the way it was done on-prem. And the example I gave to you was complexity and the quick deployment and the whole rise of fast-moving, innovative services in the cloud. So, in this landscape, what happens a lot of companies came into being, a lot of companies innovated, and a lot of products came into the mix. So, PagerDuty as I described to you was born in this crucible. We had a demand, and we fulfilled that demand.

So, in this landscape, what happened is that there were a lot of companies that came up. In today's macroeconomic environment, the customers are asking more and more about rationalization of value. They will say that we have Product A, Product B, Product C. They all seem to do the same, but let's focus on what was really important because the last decade. Everybody bought everything because nobody wanted to be left out, lest you missed an innovation cycle, or you missed something which was very important and didn't let you scale the way it was.

So, today, what we are finding is that people are asking, our customers asking us more and more for platform, for rationalization of value. They are asking us show us the hard benefits and the soft benefits, and then show me an architecture that can scale, and then they're asking for roadmaps. They're saying that, "I don't want to make the sale right now. I want you to forecast and put your skin in the game, tell us what the three years will look like. Tell us how you will interface with, say, a system of record, an application, and tell us how you will do that in the next three years." We found that this is a good time, it's a very good time in a way that we sharpen our pencils, our customers are sharpening their pencils, and the businesses cases are becoming much more elegant, much tighter, and to be honest, as an architect at heart, I will say the architectures are becoming very elegant too.

David Linthicum:

Yeah, we're becoming better at recognizing the impact of overcomplexity and also you just hit the nail on the head, the ability to deal with lots of noise. One of the things back in the day when, even in college when I was operating systems and sitting in front of a console, I'd just see message after message flying onto the screen, network packet error here and the power supply supported [cross-talk] and things like that, and it was meaningless to me.

It's like, "This isn't helping me because this stuff is flying by." You have to have some sort of an observability mechanism, abstraction, automation mechanism to make sense of what this is, and your ability to kind of understand what the trends are, even spotting issues before they become issues or things that are trending. We're seeing IO errors that are coming from a storage system, either in the cloud or on-premise, and that's going to lead to a

failure, and we have to take proactive action to make sure that doesn't fail. Because if it does fail, then we've kind of lost the game. We're having to fix things reactively, which is not a good thing to do. So, this is about being smarter with technology.

Technology has been around for a long period of time. And this is also about leveraging architectural paths that we saw a long time ago as the way to go. That's aggregation, abstraction, observability, your ability to kind of look at things in the wide, versus looking at things in the narrow, and your ability to leverage tools to kind of get you there. And I kind of see that's what PagerDuty does.

Ron Batra:

You described us really well, Dave. That's exactly the value proposition, but one thing I would like to bring out is that we also have over 700 integrations, and they are growing every day. And those are built-in integrations, so what happens is when a customer uses PagerDuty, our deployment cycles are very, very small. So, it used to be that people were using, in the traditional waterfall models, people were used to having implementations that went on for sometimes 18 months, 24 months, and then by the time you entered the project, people would forget why the project started.

So, we are the complete on the opposite end of the spectrum. We are, with our 700 integrations plus integrations, and then obviously there are APIs available for things which are unique and are not a common integration, we find that customers buy us, and they implement us very, very quickly so they start getting value realization very, very quickly. So, that's the key point. Our laser focus on doing something really well has made us lean and has made us scale. It has given the ability for our customers to scale in a manner that is very elegant.

David Linthicum:

So, let's talk about multi-cloud architectures and some of the rising stuff out there. I find that people just figured out how to make single cloud deployments work and now we're talking about multi-cloud. It's exponentially more complicated in how you build these systems. So, as someone who's thought about this, we both have thought about this, what's your advice to people who are looking to take on multi-cloud, which most people find out they just organically grow into multi-cloud and suddenly they realize there's lots of problems they need to solve using your technology and other technologies. So, what would be some of the best practices you see emerging around multi-cloud architecture right now?

Ron Batra:

Multi-cloud is a very broad word today, and I think it happened organically because customers, and I think supplier organizations, were used to this world where you had a Vendor A versus Vendor B scenario so that both the vendors could remain in good happiness and even become dependent. You didn't have platform lock in. That's why it used to be very common when companies used to buy databases, they would have Brand A and Brand B, and simply put half of their workloads in one and half the other. And, as long as you had integration and a fast network between the two, things used to work. Now let's take that to the cloud where we have not just the database, but we have the entire infrastructure-as-a-service and platform-as-a-service and microservices running on one platform, and something else running on the other platform. So, this has given rise to what I call industry and specialized clouds, and we'll talk about that more, but the very first point is that I think people should look at a few things which are very elemental.

I have a vision, a dream, and maybe the next ten years will bring that something like a multi-cloud well architected framework, but I know that there are many companies who have produced excellent, repeatable architecture patterns in the past. The database companies have, the on-prem companies have, the clouds have today. But not many people have done that in the multi-cloud space. Many years ago, there was a company in Austin that actually got sold to a tech company. They were trying to do cloud-service brokerage, and in that, the problem statement they were trying to solve was, "Hey, tell us what you want, and then we will tell you where to get the VMs and how much at price." But it was very hard to keep up with the innovation. So, there are a few things.

First is I think data gravity is an important thing, and I think let's take a step back, Dave. So, I would say that there's a set of applications that may not do so well in a cloud architecture, and they might just be very well you're doing lift-and-shift and lift-and-shift. Could be these are either legacy apps, or too hard to rewrite, or the cost of rewriting the app is going to be five times or ten times the cost of ROI. So, in that case, you could do a lift-and-shift if the company decides that strategically it's not good to have a data center. You could always go to a colocation company and the colocation companies are very smart in that they have—they're using interconnection, they're in key locations. Ashman, Virginia, for example, Palo Alto, London, Amsterdam—the interconnection hubs of the world. So, that's where all the data exchanges happen at a physical level between the clouds. So, the first principle I would say is take the big data type of environments which don't need to be moved into cloud, move them into a co-lo over there.

Then secondly, once you do that, then look at the newer applications that are coming into space. If you have massive data in one cloud and you're trying to use an AI engine on the other cloud, it's not a good practice because you will be doing continuous training, you will be moving data back and forth. If you have AI and machine learning and automation, which no company today can afford not to have—it's the order of the day—it's what all of us have to do to make our industry better. The data and the AI processing should happen under the same umbrella. And it could be that yes, it could be the same cloud provider will be more ideal because the micro-tooling and the efficiencies that happen between moving a model back and forth, learning from it, and applying those principles are better in the same space.

Now, that's one. And then the other is that, now if you were a case where there was Cloud A and Cloud B, and for some reason you had to keep them separate, there's nothing wrong with that, then let's just make sure at the physical level they're connected. At the application level, we need to make sure there are platforms that provide you a smooth console or dashboard and let you operate on a pane of glass that is not ten panes of glass together, but something that gives you a view into how the multi-cloud applications are working. That could be operations, that could be service management, that could be governance, and those are some common functions that might do very well abstracted out of the large mega-clouds.

David Linthicum:

I think that's great. I think you pretty much explained what are some of the best practices we have to look and leverage, and what kind of struck me is that it's very pragmatic, the advice you're providing. It's things we've known for years as architectures. It's a matter of leveraging sound architectural principles

to deal with complexity in a way that's going to reduce the redundancy and become more pragmatic in terms of how these systems are going to run. You've got to remember we can always make something work, but that doesn't mean it's the right architecture.

We're looking for something that not only works, but is optimized to bring the most value back to the business, and it sounds like something nerdy to say, but the reality is that's the objective as IT leaders. We have to leverage technology as a true force multiplier for the business, to bring the most value back to the business. Let's talk about industry clouds and specialized clouds. So, what do you see the evolution happening there?

Ron Batra:

So, it used to be that in the on-prem world, the industry verticals really were a sophisticated go-to-market notion with minor changes to a product SKU, for example. But in the cloud world, people are expecting more. In fact, I would go so much to say that the cloud has raised the game for all of us. All of us have in the industry, whether you're a database provider or network, all of us have to up the game. But in upping the game for industry cloud, what that means is that we are providing a certain set of functionality that happens only in one industry.

An example could be manufacturing. So, imagine a mill that is producing timber, and it used to be that when equipment used to fail, the equipment used to fail, and you had downtime. But imagine audio sensors in the shop, an IoT type of audio sensor, and these audio sensors are picking up that the bearing is going to fail. And just by the difference in audio signals, you can tell that this bearing is going to fail, hence now what we have done is proactive, preventative maintenance.

So, extending that use case to so many industries, there are industry clouds for finance, FinTech. There are industry clouds for telecom. There are industry clouds for manufacturing, retail. The use cases are different. The tech might be the same, but what that does from a customer perspective, and Dave, you pointed out very aptly a few minutes ago when you said that our job as IT leaders is to be a force multiplier for the business. If one keeps that as the north star, then you look at it if I'm a business, I'm a telecom business, I'm a manufacturing business, if I have an industry cloud versus infrastructure-as-a-service or platform-as-a-service or a SaaS, which is not differentiated, the biggest value I get is quicker time to market and deeper functionality. And more importantly, I get the partner who has sold me the solution as somebody who's going to invest in the solution.

So, what that means is that for today I start with my journey in the cloud, I'm a manufacturing company and I'm taking Plant A and I'm doing something in Plant A in Alabama, and that Plant A is doing really well. Now I want to do something more significant in the same plant, or I want to extend that to my other manufacturing locations around the world. If the industry cloud provider is with you, is investing with you, co-investing with you, then what that does is the time to innovate something is not going to be so long. So, we've got something quicker to market, but more importantly you can focus on your core competency.

The core competency is to produce something in manufacturing. And I don't have to worry about understanding what the best microarchitecture might look like, what the best microservices will be, what apps are designed for. I don't have to worry about all that. The industry cloud does that for me. And so that's the value, and the differentiation is, yes, companies will produce go-to-market use cases and lot of thought leadership, and that is good because that explains that, at the most basic level, if there's a differentiated SKU, a special SKU by any company, and I use the word SKU loosely. What I simply mean is a product that is designed specifically for a certain industry, then everybody wins. So, that's an example of industry cloud. So, specialized clouds are also very similar to industry clouds. At PagerDuty, I would say we are specialized clouds. We provide an operations layer. We focus on doing something very well, and we are very specialized in that, so we're not doing supply chain, we are supporting all those functions, all those systems of record. So, that's the—that's my definition of industry clouds, the value proposition as well as specialized clouds.

David Linthicum:

Yeah, they're very important. I think we're going to see more purpose-built clouds that are going to be separate from the big public cloud providers that are going to either run within the public cloud providers—a company that is hosted on a public cloud provider but they're a separate cloud unto themselves, a little confusing. But more and more specialized clouds are going to be making vertical-specific services. So, let's get in a time machine, go forward ten years. What are we going to be talking about on this podcast ten years from now, Ron?

Ron Batra:

So, ten years from now I think there'll be a few things. We will either look back at the impact of generative AI as, "Why didn't we think of this before and this is so cool," or it will be, "this took out everything." So, I tend to focus on the first one. So, the journey of AI as a force multiplier is growing continuously, and then we are seeing it in different start with AI machine learning, now it's generative AI, tomorrow it will be something else, natural language, this, that.

But what I see is that the core clouds, we won't be using the word cloud anymore. My perception is that people will simply say that, "Yeah, I'm doing this and I'm doing this," and people are focusing on the business functionality. They are not focusing so much about where you're getting the technology from. Then they will say that, "I'm using a well architected multi-cloud framework," and those well architected multi-cloud frameworks may come out by the GSIs, the SIs will show leadership in that. Integrators and consulting firms, there will be three or four variations of that. Automation will improve the time to market.

Innovation will continue in the cloud. Hyperscalers are not going to stop innovating, and, so, it will be more of focusing on the business and less on the tech. And then I see industry clouds and specialized clouds growing more because, as the focus on the business grows, and as the focus on keeping all these things working, companies who are doing functions as kind of an overlay function or a superset of functions, I see their prominence growing a lot more.

David Linthicum:

Yeah, I think that's exactly right. I think moving forward we're going to be able to leverage technology as technology should be leveraged, the ability to do our jobs better, and so, it's just going to be additive to our ability to solve bigger and more complicated problems as we talk about on this podcast. So, where can people find more about you on the web and your company?

Ron Batra:

I'm on LinkedIn. Pagerduty.com is perfect we have a trove of information there. I am approachable on LinkedIn.com/iamronbatra, and that's where I usually blog and share thought leadership articles, and I'm quick to respond to anybody who wants to have a discussion.

David Linthicum:

Yeah, make sure to look up Ron. He's one of those guys out there solving the real hard problems, and I think that's what we need. People are thinking through this stuff. You've got to remember that this is becoming harder and harder to deploy this technology in ways that are going to be valuable to the business and just becoming more complicated. We have many more moving parts, and we have lots of different advanced technologies that are coming up, but we have to figure out the role that those advanced technologies play in solving these issues or else we're just going to make the problem bigger.

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