



The Deloitte On Cloud Podcast

David Linthicum, Managing Director, Chief Cloud Strategy Officer, Deloitte Consulting LLP

Title: Cloud 2022: The biggest challenges and how to overcome them

Description: As cloud moves into its second decade, there are still growing pains. In this episode, David Linthicum and Mike Kavis discuss cloud's most pressing issues and offer solutions. Leveraging cloud for innovation, multi-cloud complexity, a talent shortage, and slowing cloud migration are the top challenges. The solutions? Focusing on value delivery, aligning business needs with technology, changing organizational culture, and realizing that slowing down isn't necessarily such a bad thing.

Duration: 00:30:22

David Linthicum:

Welcome back to the On Cloud podcast, your place to find out how to make cloud computing work for your enterprise. This is an objective discussion with industry thought leaders who provide their own unique perspective around the pragmatic use of cloud-based technology. Today on the show, my good friend and colleague, and host of Architecting the Cloud, Mike Kavis is here, as we look at 2022 so far and what we can expect for the rest of the year ahead. How're you doing, Mike?

Mike Kavis:

Doing good, Dave. I haven't seen you or really anybody in so long, but I think we probably talked around the end of the year how we thought the year ended. So, it's great to get back with you here.

David Linthicum:

Yeah. I just want to point out we were right about everything. Everything came true and we made no mistakes. It's awesome. It's kind of funny, listeners of the podcast, you probably think Mike and I are sitting in the same room, but he's actually in another state. I record one podcast, he records another, and they exchange them off in the thread, but we actually don't spend a lot of time talking other than this. So, this is a good time to sync up with my good friend, Mike. How long have we been working together, Mike, like 15 years? I think at least.

Mike Kavis:

At least. It pre-dates cloud. I know that. It was back when SOA (service-oriented architecture) was starting to become a buzzword, so however long ago that was.

David Linthicum:

Yeah. Those were the days. Everybody was running around, trying to figure out what this stuff is and whether we should jump onboard or not, and here we are, 2022. It's all cloud all the time. So, let's get to the topics. One of the more interesting ones that's kind of fresh in my mind, because I've been talking to the press about this recently, was a cloud and innovation survey that we did at Deloitte. Not necessarily to plug the survey, but there was some good data that came out of that.

Ultimately, this is about the fact that the industries out there—summarizing the survey—are not getting as much value, in terms of innovation value, out of the investment in technology than they thought. In other words, it's harder than they thought. It's taking longer. And they're not necessarily seeing the immediate return on investment in any technology, any digital transformation technology, that's really defined by the business as taking innovation to the next level.

So, in many instances years ago we said, "Move to the cloud because it has agility and the ability to leverage some great technology." If you look at the R&D dollars, all that money is being spent in cloud. So, it's the best databases, best AI systems, best whatever, because that's where people are concentrating the innovation and the technology.

So, enterprises thought that in adopting cloud will speed up innovation, since we're looking to leverage innovations to force multiplier to kind of take the business to the next level. When you think about it, innovation becomes the primary production element that defines value within these companies, and they're not necessarily seeing the innovation occurring at the pace they would like.

What are your thoughts on this, Mike?

Mike Kavis:

I see that, too, and I think a big reason for that is there's so much focus on the technology and not as much focus on, "How do we think about how we run this stuff? How do we think about how we organize? Do the old processes we used to get stuff in production when we had physical servers still make sense here?" So, they kind of skip the people and process stuff, and they can only go so far with technology.

I think the other thing is sometimes the technology is a hammer looking for a nail. So, they go in and say, "We're going to do this AI," but they don't have a business problem to solve with it. They just go do proof of concepts with AI, and they run around saying, "Here, Mr. Business, how can we use this?" So, I see those two combinations of things. This stuff isn't as easy as I think once thought.

David Linthicum:

Yeah. I don't think I ever said it was easy. You never said it was easy. Some people did. A lot of marketing dollars being spent out there on pushing people into the next generation of technology, in this case cloud digital transformation, now edge and IoT and all the other things we're focusing on.

I think the core thing is, in my opinion, is, there really doesn't seem to be strategic thinking around using technology. It's all tactical thinking. So, in other words, you just kind of hit the nail on the head. People are focused on what technologies they're going to leverage. So, they know they want to move things in the cloud. They know they want to leverage AI, and not necessarily holistically how this is going to fit into some sort of a longer business strategy, and how the business is going to be amplified by the use of technology.

I think they're missing the boat there. In many instances they're getting into complexity problems. They're getting into overspending problems of getting into the cloud. In fact, many of these cloud applications that we're leveraging on-demand are much more expensive to maintain and operate than we thought. Now it's a bit of trouble because they burnt resources into doing things wrong. Now when it's time to do things right, there doesn't seem to be the resources around to fix it. So, how does someone stop digging if they're in a hole, Mike?

Mike Kavis:

It really comes down to focusing that outcome and value. It's easier to say. But the best example I ever saw, I saw this deck once that the client had. They're mostly a mainframe shop with just a little bit of client server. Then someone proposed their digital experience, and the architecture slide had every single buzzword you can imagine. They were going to introduce blockchain. They were going to introduce AI/ML.

I'm like these folks are on a mainframe, right. Just pick one of those seven buzzwords and it's going to be a hard transformation. You're trying to do all seven at once. So, I think there's too much focus on the technology and not enough focus on what problems we're trying to solve. Boy, Dave, haven't we been talking about that 15 years, back to SOA?

David Linthicum:

Yeah. I think the reality is that we're going to go through some painful lessons over the next few years as try to correct course and things like that.

But really, I think the focus is going to be on looking at this stuff as a strategy. In other words, what's your technology strategy as it relates to your business strategy? It's figuring out where you want to be innovative in the space, where you want to take the business to the next level, whether you want to be a disruptor, someone who is a medium disruptor, or a complete disruptor, or just a beginning disruptor into this space, and how you're going to grow your business.

Because if you don't figure this out, and there are many studies that back this up, you're eventually going to go away. This isn't something where you can create a better product and not have a great marketing talent, not have a great IT talent. The reality is that the value of the business becomes the IT and your ability to kind of create a customer experience that's going to be superior to your competitors.

So, it doesn't matter if you're selling pharmaceuticals or tires, this is going to be something that's going to set your business apart. I think that it just needs to get a higher-level understanding, and it needs to have more investment. The big thing, as we just mentioned, it needs to be strategic to the business, not necessarily something that's tactical that we just throw money and tools at. Final words on this?

Mike Kavis:

Just a really good example to put that in context, one of my favorite clients was on this journey to basically lift and shift everything, and it wasn't making a lot of success. So, they changed their mindset and said, "All right. Where are spending most of our money on infrastructure in the next two years?"

They put it in a bunch of categories and they said, "Why don't we focus on moving those types of things to the cloud?" They picked a couple use cases. One is their dot-com website, which is customer-facing, and they fixed—service by service, they moved to cloud. They had this hybrid architecture, and they started solving problems with services.

So, they focused on value. They've provided so much value, but they've only moved probably five to ten percent of their portfolio. So, instead of just trying to move everything, they said, "Where can we add value to the business?"

They also drew a line in the sand. They said everything new will be built cloud native. I think after spinning for a couple years, they've got to the point where they're producing a lot of value and they're not worried about the thousands of apps. They're just worrying about what's the next thing we could add value. That's one of the best examples I've ever seen.

David Linthicum:

Yeah. We see points of light out there in people who are leveraging this stuff effectively, and I think we're going to continue to see that. The reality is people are going to follow those who win the game, and I think those are the people who are going to win the game.

So, next would be rise of multi-cloud continues. This is probably the easiest prediction to ever make. We talked about how it's impacting the enterprises in terms of operations, development, hiring, things like that. The reality is very much when people got into cloud, typically through shadow IT, in other words, someone had a credit card and opened an account in the cloud, and there you are, you're in the cloud.

And we're doing the same thing with multi-clouds. In other words, people are using what they consider to be best of breed technology to take their projects, their products, their innovations to the next level. So, they want to use a particular AI system, a particular database, and those things are going to be hosted on different cloud providers. So, therein is how we get to multi-cloud.

What's often said out there is that people aren't looking—if you're not looking for multi-cloud, multi-cloud will find you. It's just something that kind of happens as an emergent or evolution to the business. Now there could be rules and policies that are set up within a company that thou shalt only use this particular cloud provider, but you don't want to do that either because you don't want to stop people from being innovative with these systems, and taking the best of breed technologies to add to these projects to make them more innovative, more productive, and, ultimately, more optimized.

So, we're heading this way, and if we're going to go this way things become complicated. Operations becomes very complicated, so you're not just operating within a single cloud anymore. It's across clouds, adding legacy systems to it, IoT, edge computing are part of that, developing these to support multiple targets instead of moving to a particular cloud brand. Were you moving to all of them and using a similar DevOps change and similar processes to achieve that? We have to hire more people with different skills.

So, it's heterogeneity platforms and therefore heterogeneity in terms of skills. What other things do you think we need to consider as we start moving into multi-cloud even more?

Mike Kavis:

I always say multi-cloud is not a strategy; it's a reality. Usually, multi-cloud happens and then you try to put a strategy around it. I got one real warning here though. That is a lot of times companies make a decision everything must be cloud agnostic. We're going to be a multi-cloud, hybrid company. Therefore, you must use these sets of tools, which are cloud agnostic.

Then you talked about complexity. Well, nothing gets more complex about putting a common tool across three or four different cloud endpoints. I think what's happening here is they are losing all the agility of the cloud. I think we should take a step back and say there are use cases when I can go all-in at anyone—I'm just going to say the Big Three—any one of the Big Three. Then there are use cases where I need to be agnostic.

The infrastructure team should not be dictating. They should provide capabilities so the businesses can make those choices. But too often I see it's like, "We need to be cloud agnostic. We're going to roll out our own containers. We're going to roll out this pass," and they kind of tie the developer's hands. They're not thinking about business use cases. They're thinking more about, "I don't want to be tied into anything," yet they're sitting there with databases and mainframes that they've been tied into for 30, 40 years.

So, my caution to multi-cloud is it shouldn't be an either/or. Multi-cloud, there's really two types, two approaches to this in my mind. One is using the right cloud for the right job. The other one is be agnostic. I want this to run everywhere. I think companies should support both. Unfortunately, too often they only support, "You must be cloud agnostic." I think, going back to lack of innovation and lack of agility and value, that's a big cause of it in my opinion.

David Linthicum:

Yeah. I'm not sure you could put a value like that in front of the business requirements. In other words, we're going to be cloud agnostic. We're only going to use open-source stuff. We're going to use cloud native architecture or something.

Those sorts of things are fine, and those are architectural options that we're able to evaluate and look in the system, but the reality is that shouldn't dictate what we do. In other words, we'll look at the business as to where we're taking it, and what in backing the technology solution is the business requirements. I'm not sure why that's so hard, but it seems to be something that people are missing. They'll define and declare policies, declare almost religious beliefs around technology, declare a loyalty to a brand. You can't do that anymore.

So, the solution that you're likely to leverage is going to be heterogenous. It's going to deal with probably more than one single cloud. Who knows how many. It depends on what you're doing. It's going to need, if you're moving into a multi-cloud, kind of the next level of sophistication in how you're going to do security, and how you're going to do operations, and how you're going to do governance.

Those are typically things that exist within and between different cloud providers. So, it's not something that only works for a particular cloud provider, and therefore you're picking two different operational approaches and tool sets for different silos and different walled gardens when you have different cloud computing brands, but something that works across all of them. That's a more difficult problem to solve, but unless we figure that out, I think that's where multi-cloud is going to hit a wall. They call it a complexity wall. That's what the industry is calling it right now.

I think that this is going to matter, and many of the enterprises are going to find out that they're not advancing as quickly as they should. They're not getting—to the previous story we just talked about—not getting the innovation value out of utilization of cloud computing, because this is costing way more. It's way more complex. Therefore, we're having more outages and breaches than we thought we would have, and we have to rethink in how we manage a multi-cloud, which is typically going to be cross-cloud strategies. What are your thoughts?

Mike Kavis:

I agree. You're talking right about complexity a lot. I think this multi-cloud is one of the most complex things on the planet. Even though we're going to containers and microservices, which are supposed to be independent, there's just so many moving parts that things could fail in so many areas, and you need so many different experts to sometimes troubleshoot these things. So, I think the multi-cloud solutions aren't the most mature in the world. I think they'll get better. But I also think it should be thought of as one option, not the option.

David Linthicum:

Yeah. I can't agree more. I think ultimately this is something, again, we have to get to a strategy in how we're going to approach it. The big thing in people who are winning with multi-cloud is they put enough upfront planning to figure out how to deal with those problems before they start throwing technology at the issue. In other words, before they buy a single software solution or sign up with a single cloud provider, look at how this thing is going to be configured and look at how it's going to solve the business problem.

We should have an understanding of that, then going into that is not so scary. And by the way, you're not going to make a lot of mistakes with making things overly complex and overly heterogenous, and having the abstraction layers and the automation layers to operate these things at scale, which is going to be very important.

So, the next topic is a little lighter. The race for cloud talent is getting serious. In fact, if you look at the surveys I'm reading, it's really the major limitation to enterprises succeeding with cloud. In other words, it's not limitations of the technology. The technology is there and it's well done typically, and we're able to solve problems with it. It's a matter of the fact that they can't get the expertise they need to use the technology in a way that's going to be of value to the business.

So, that's the limiting factor. In other words, their ability to become—and this back to the innovation problem—innovative and productive with any technology—in this case cloud computing—is basically being limited by the number of folks that the recruiter can hire. That seems a bit strange. It's always been a tight labor market when it comes to tech people, but it's never been this tight. What are you seeing out there?

Mike Kavis:

I agree. You and I haven't changed jobs in a while, so I don't know. As hard as it is to find people, everyone is hiring your people. You have 500 cloud experts to get. At the same time, you just lost 30. So, it's really, really hard, so they do need that. Then the fact that a lot of us have been working at home for two years, now that becomes a requirement for a lot of people. Where with some companies, you had to live in the area, or wherever the offices are.

You're going to have to train up a lot of your people because there's too much competition. The cloud providers are all hiring hundreds of thousands of people. Big consulting firms are hiring. Some of the big banks are hiring thousands. That's just the big guys. If you're a mid-size or a Fortune 500, you're competing with all that, and there's just not enough people out there. So, you have to get creative.

David Linthicum:

Yeah. And I think it's even areas that people don't think of focusing. So, obviously raising wages and giving them more vacation pay and higher sign-on bonuses and things like that are ways of attracting folks. But The reality is that technical people, and I've been hiring technology people for a long time, are attracted to cultures where they're able to be creative and innovative and really appreciated for doing that.

So, in many instances this is about changing the culture to make it more attractive for this pattern of people, people who are technologists, innovators, creative types who understand cloud computing and other technologies. So, Is this going to be possible for more traditional companies?

Mike Kavis:

They should. I live down here in sunny Florida, and I see so many people flocking down here. You can live anywhere. Working remote, you can live anywhere you want. So, people are just living where they want. So, you kind of have to change your model that you're not going to have everybody here in the office at some point.

Now there are other—I have a bunch of colleagues I work with who have young kids, and it's almost impossible to work at home. It's just too disruptive. So, some people welcome it. So, you've kind of have to accommodate both of this.

David Linthicum:

I think the big thing is going to be creating a culture that's going to attract people into an organization. That's probably the most important thing, in my opinion.

So, the final topic is: is cloud migration slowing down? One of the things I noticed in looking at the recent surveys is that we seem to, not necessarily slowed down significantly, but we're not accelerating at the pace we were during the pandemic. Around 2020, suddenly people realized that, okay, the pandemic is here. We need to leverage platforms that are much more safe for our applications and our data. In many instances, quarantine shut down data centers, enterprise data centers. So, we found if everybody is going to work remotely, and we're going to leverage data remotely and leverage processes remotely, then moving to the cloud was a better alternative.

Plus, clouds weren't getting shut down. They had the scalability in them. They had the ability to kind of do things that a lot of enterprise data centers couldn't do, including agility and providing better technology—all the things we just talked about. However, in making that move we from—the way I like to describe it is migrations were going at 50 miles an hour and we kind of accelerated to 80 miles an hour. I don't think we can keep that acceleration up forever.

So, what I think is we're kind of going down to 70 miles an hour, maybe 60 miles an hour, not necessarily going back to 50, but it's slowing down because we just couldn't keep up the pace. A lot of money, a lot of time, a lot of risk kind of went in there, and certainly mistakes were made as people moved a little too rapidly to the cloud, made strategic mistakes, architectural mistakes, picked the wrong technology, things like that, because it was a mad dash to make it happen. Now people are thinking a little bit more rationally around how they're going to leverage this technology.

The other thing, and this is just a theory of mine, and some of the surveys highlighted this as well, that the low-hanging fruit seems to be diminishing. In other words, we had applications that were easy to move, even lift and shift, even though in many instances probably that shouldn't have been done. It should have been refactored or changed to leverage the native features on the cloud. But now we're getting into the legacy systems. Now we're getting into PDP11s, all these things that have been sitting around in our data center forever that we're staring at.

So, if we're going to shut down this data center, we're going to have to move those things, either to a cloud provider, a managed service provider, a co-location provider, and we're going to have to modify those applications if we make the move. We're finding that some of those applications, some of those systems are not yet cost viable to move to the cloud. In other words, it's going to cost way more to move them to the cloud than the value it's going to deliver back to the business. So, that's why I think things are slowing down, those two factors. What are your thoughts on it?

Mike Kavis:

I agree with that. I think there's one more factor you kind of alluded to about moving too fast. Probably the most rings I get on my phone are on the topic of resiliency. What's happened is, we moved to the cloud so fast, and all of a sudden our SLAs are going down.

I think that's a big slowdown, because I think people are starting to look at, "How do we rethink ops? How do we rethink operating model? How do we rethink process centers?" There's kind of a pause to make the things we moved work much better and be more reliable before we go make another big investment to move the next big batch.

Almost every phone call I get now is on that topic. We're here now. We know cloud. But, man, stuff is breaking and we have all these problems. There are so many projects that are titled "resiliency" right now.

David Linthicum:

It just goes to show you if you move too quickly and you're lifting and shifting everything, you're going to make some mistakes. You're going to end up migrating twice. You're going to migrate once to get to the cloud, realize you made a mistake, and migrate twice to actually fix the mistakes up on the cloud once you've migrated there.

I think that gets to a good point. I think that if you're going to migrate ten applications, it's not the speed that you migrate those applications, it's the ability to look at what those applications need to migrate to the cloud—the refactoring you need to do, the ability to leverage some of the cloud native features, performance, security, governance, all those things that cloud provides.

I think everybody moved rapidly to the cloud, and that's where the stats come from, where we went from 50 miles an hour to 80 miles an hour. But now we're realizing that we may have to go slower to go faster, and I think that's a healthy thing to do.

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Mike Kavis:

I'm on Twitter at MadGreek65, and you can always find me, Mike Kavis, on LinkedIn.

David Linthicum:

Yeah. Check out Mike's stuff. Also, buy his book. So, until next time, best of luck with your cloud projects. We'll talk again real soon. You guys have a great time. Take care.

Operator:

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