



- Patrick Moorhead: Matt, it's great to see you and thank you so much for joining us here at the Six Five Summit 2022.
- Matt Baker: Well, it's great to be here. Thanks for having me, Pat. It's always great to chat with you.
- Patrick Moorhead: Yeah, it is great. And we interact back and forth on Twitter a lot and over conference calls, but it really is a privilege to have here. And by the way, congratulations on your promotion. From all the work that I've seen you do, you definitely deserved it, so congrats.
- Matt Baker: Hey, I appreciate that.
- Patrick Moorhead: There was a lot of content and interaction last month as we were doing Dell Technologies World in real life in Vegas, and there was a lot of talk about hybrid and multi-cloud. Now, my firm, 11 years ago was, one of the first companies who said, "Hey, there's going to be this thing called a hybrid cloud." Okay, maybe we didn't use those exact words. We jumped on the wrong horse with OpenStack, but who didn't? But listen, Dell too has predicting a hybrid and multi-cloud world for many years, you can pat yourself on the back, but what did you see happening in the industry then, and more importantly now?
- Matt Baker: Well, I think that we started talking about cloud, how long ago was that? It seems like it was what?
- Patrick Moorhead: 15 years ago.
- Matt Baker: Yeah. 15 years ago. So two years into my stint at Dell Technologies. And there was that famous book by Nicholas Carr called The Big Switch, which I remember reading it, it was absolutely an interesting take, but I thought it was fundamentally wrong. And in fact, we had this original cloud crowd at Dell that got together to talk through, all right, what is this going to mean to us? And a lot of people were predicting that this was existential to any infrastructure provider. And ultimately we set it up as a dualling books. So at the same time came a book called The Long Tail, which predicted this notion of, yeah, there are these large things, but ultimately there's a long tail of diverse needs. And we basically thought that look, Nicholas Carr's fundamental theory was that IT was undifferentiating and unimportant, and therefore you could outsource it, and made the analogy with power generation and how people used to run dynamos and then all of that got centralized.
- It just struck me as fundamentally flawed. Fast forward 15 years and IT is at the center of every company. I would say it's powering all of the innovation that we see around us and some of the largest companies in the world are IT companies fundamentally. They don't produce any atoms, it's all about flowing bits. So that was really what gave us the conviction. Unfortunately, a lot of people bought into The Big Switch, including many on the financial investor side or the analyst side. And so that's still something that we're really proud of the call we made and we're really happy to see the world come around to our point of view, but it was somewhat a lonely and very anti-unconventional wisdom take at the time, and I know you, like me, saw why that was fundamentally not going to be the case.



Patrick Moorhead: Yeah. And I'll tell you what, when I saw Andy Jassy from AWS get up on stage about three years ago and introduced it's on-prem capability, I knew it was done. We already had AWS and GCP provide this, Kubernetes became essentially the standard and even some multi-cloud opportunities. So I see the candle burning on both ends, which is you have the cloud native folks trying to build out a very robust on-prem and even edge capability, and you see the folks that were the traditional data center folks building out a hybrid and multi-cloud environment. So that brings me to the million dollar question here, which is what is your multi-cloud strategy and how has it evolved over time? You talked a little bit about how it evolved in the beginning, but how about now?

Matt Baker: Fundamentally I think that I'll go back to what I was saying, which is this notion of technology fueled innovation. Early on in these major architectural cycles, and I would say we're pivoting over to where the majority is starting to embrace cloud native innovation, it's really important to operate a much broader ecosystem. There's innovation happening everywhere. The clouds are not differentiated from one another based on pricing, it's not like this pricing arbitrage opportunity, they're all doing net unique things. And so from my perspective, the thing that we need to do is we need to get out of the mode of trying to build these walled gardens. It seems like everybody's been trying to replicate Apple's approach to consumer walled gardens for the enterprise. And we all know that's difficult to impossible. I would say it's impossible for [inaudible]

Patrick Moorhead: We're quite frankly IBM in the 90s.

Matt Baker: Sure. Look, we need to give our customers and the industry access to the breadth, the totality of innovation occurring in the industry today, and that means building ecosystems. And I would say we are, Dell Technologies, at our best when we're hosting broad ecosystems. That's how we built out a massive disruptive business in the workstation space, by coalescing all of the application vendors around x86 technology versus at the time it was SPARC Sun based workstations. So we really see this as one of those same, big architectural turns where you can't bet on one horse, otherwise you're going to foreclose off innovation that would likely benefit your business. And so we're working actively with each and every cloud... Let me call them cloud operating system vendors, because in a lot of ways, what you see with Azure Arc, you said EKS, anywhere, these are cloud operating systems that can run on Dell's platforms, and frankly, we're delivering them all today.

Patrick Moorhead: It's great. In fact, at Dell World you made some key announcements that I saw, I thought were quite interesting. APEX Cyber Recovery Services, APEX Multi-Cloud Data Services, a lot of announcements. Are there any one of those announcements that really stand out to you as being the most strategic?

Matt Baker: I would say in general us declaring this on-prem, off-prem duality dead, I think that's the meta, and as a result of that you end up with a series of announcements. Look, the cyber recovery, and, let's just say, fundamental DR backup, what we used to call [inaudible], is one of the primary use cases for public cloud today and therefore that was an obvious first step. And by the way, we made that first step eons ago. We protect, I think, the number's over 10 exabytes of



data in the public cloud today, but then it's, okay, well, how do you get all of this great innovation into the world around us? So the announcements like with Snowflake is how do you mate up with some data storage that, for many different reasons, you might not migrate into a public cloud environment, and I think you'll start to see that hybrid and multi-cloud environment build out.

So I wouldn't point at any one single announcement, I would point out at the totality of that meta of, look, we've been locked in this silly notion of a zero sum on-prem, off-prem thing, for whatever reason, it's hard to get people out of that mindset and think of this as more rising tide, floating all boats. So I think it was the collection of announcements. And you'll start to see throughout this year and going forward, more and more of that build out of the ecosystem. I would point to a couple of things that were referred to that were not launched. We launched these last year and before, we were the launch partner for EKS Anywhere with Google. We have robust deployments of, of course, VMware, our best partner. So we're building out that ecosystem and as we look back, say, two years from now, you're going to say, "Oh my gosh, look at that. That's this huge string of innovation that really makes this concept real."

Patrick Moorhead: Two of the ones that really stood out to me were Project Alpine and what you're doing with Snowflake, I thought those were... I know you referred to Project Alpine, but can you take the audience through those and why they're different, why they're unique and why they're strategic to Dell and their customers?

Matt Baker: I would say storage services in the cloud, which is ultimately what we're talking about with Project Alpine, we have tons of software innovation occurring in our storage environments, the typical vehicle for delivering those has been storage systems, beforehand, proprietary storage systems. Now, more software defined, and Project Alpine is about instantiating all of these great storage services in all of the environments, be they on-prem, off-prem. So you see us dropping them into each of the major public cloud environments, mating them up with things like VMC on Dell EMC and VMC on AWS. And so really bringing those advanced storage services that, I like to say, they can put the cloud on sale because we have these very sophisticated data reduction techniques, how we do replication economizes the ins and outs, and the transit fees that you might experience.

And so Project Alpine is about getting that Dell storage IP everywhere. Now, what is unique about that is there are others who do it, and some of our competitors are doing it, but simultaneously what we're doing is we're brokering this relationship with the public clouds themselves and they're instantiating their cloud operating environments on premises, on Dell provided infrastructure, and when you combine the two together, what you get is this brilliant matching of application orchestration and data orchestration. You put those two together and voila, you've got the full package. So I don't think that there's anyone in the industry addressing all of the sides of the coin, and if I boil it down, just the word itself, information technology, can boil that down to data, applications and infrastructure. So addressing both parts of that put the full sphere together and give 360 control over all of your technology investments.



Patrick Moorhead: I'm fascinated that in the first 10 years of the public cloud, none of the public cloud people wanted to really talk or interact with the on-prem folks and the edge folks. And I am seeing an absolute sea change, and the last year I've seen some agreements that to me... And listen, you and I both know exactly how different companies operate and a lot of it comes from their future view. And based on the agreements that I'm seeing made, there's absolute a universal understanding that historically on-prem folks need to have good agreements with the native cloud folks, and native cloud providers have to have robust agreements with on-prem. It is no longer a one way street anymore.

And I won't put your feet to the fire here, but we'll talk offline, but I'm waiting for that shift in business growth, where I see some of the cloud plays, and I know it's hard to really understand exactly what's IaaS versus PaaS and SaaS, and a mixture, but let's just say for sake of argument, 30% IaaS growth, and then I look at the growth on premise and it's like, "Okay, at what point do these start equivocating and start looking a little bit more similar?" So that's definitely on top of mind for me.

Matt Baker: Well, I think that you're already starting to see elements of that level out if you pick apart the details of it. So the HCI businesses, which if you squint at them, they look a lot like the vehicles of what you'll see, you would say, an Anthos appliance or an Azure Arc appliance. It just happens to be a VMware based appliance in our case. And if you squint at this, that market's been growing 100% plus for probably a decade. So I think it's like when you play in the breadth of the market that we do, there are going to be puts and takes throughout, and there's doubt that there's a transitional period from IT as the cost center to IT as business essential, we're not through that knothole.

And when we get through that knothole, you'll see explosive growth again. And I think you're seeing that again, like I said, in the pockets of the new. And I would say that, not getting into numbers and names, but we've built many, let's say, cloud operating system franchises, that be it VMware powered and had some other partnerships before that, we do have businesses that are significant with others. So we are seeing that growth now, and we're really excited about it, but, look, the 30% numbers, you'd love to post those. Heck, look at our server growth rates for the last couple of quarters. It's not like those aren't pretty impressive. Did you ever think you'd see those numbers growing like that?

Patrick Moorhead: Not for a long time. No. It's been incredible. And I know when I cover year earnings, I am looking for and educating the market on your big growth areas that are related to the new way of doing work. Matt, part of your job is essentially you have to predict the future by doing a bunch of different scenario types of plans, but in one way, the company and the board and employees look to you and your team to predict the future, and then to determine what are Dell Technologies next best steps. I think I've heard you talking about seeing around corners before, and I didn't spend as long in my corporate strategy gig as you do, but it's tough, so I have to ask, what is the next shift for the cloud?

Matt Baker: Well, I think we're seeing it already and it's just what you said, which was there were players with some really strongly held beliefs that bought into that big switch narrative lock, stock, and



barrel. And I think what you're starting to see is you're starting to see the beginning of a tumbling back towards decentralization. And I like to point to one of the largest public cloud providers out there, the CEO, Satya said, "Hey, we've reached peak centralization." Is that in their best interest? I should say it has nothing to do with their best interest, but is that the narrative that you would think he would lean into? No, but it's true. And so I think what we're starting to see is this natural movement away from hyper centralization and more technology finding its way out into the world around us.

And there's some really simple and fundamental rules governing this, which is more and more of what we're trying to do is to automate business processes, manufacturing processes, safety processes, all of these things, we're trying to automate them in real time. Guess what? Real time is killed by latency, and latency is ultimately governed by an inarguable rule of physics, law of physics, which is the speed of light. So if you want to operate truly in real time, you have to have latencies between five and eight milliseconds, a data center is thousands of miles away, you just can't do that until someone perfects this notion of using quantum entanglement for zero latency coms, which by the way, Einstein believed was not possible, you're going to have to get stuff out into the world around you in and uniting the physical world with the digital world, that will lead to massive decentralization.

People call it edge, we talked about IOT, whatever, it's clear that more and more technology will be packed into every corner of society in order to bring that digital, real time innovation to the world. And so from my perspective, I don't have to see around that corner. I already see it. What I think the rest of the world is conventional wisdom can be the death of good thinking. And conventional wisdom is still locked in, it's a zero sum, on-prem, off-prem world, and it's like, "No." It's a highly diverse, decentralized, not necessarily in the sense of the crypto decentralized, but a truly decentralized world. And in order to do that, you have to have a player that's really good at servicing, supporting, deploying, operating infrastructure in millions of locations.

And guess what? There's a lot of companies that are good at operating hundreds of thousands of things in a handful or a couple handfuls of locations, we're awesome at deploying, managing, servicing tens of things, hundreds of things, thousands of things in millions of locations, that's what we do for a living and that is what the world will need, but we're going to do it in partnership with all of the innovators. We are going to host an innovation ecosystem and that ecosystem, I think, the rise of ecosystems and move away from this attempt to wall off the garden, I think that's the wave of the future.

Patrick Moorhead: I've learned a lot of lessons. Gosh, I guess I'm close to my 32 years in tech anniversary here, and a couple big lessons that I always learned was that the industry has times of centralization and has times of decentralization. And typically when you go to decentralized is when you've cranked most of the value out of that centralized being, and it's actually holding you up from innovation.

Matt Baker: That's right.



- Patrick Moorhead: And you find a way to manage those decentralized assets, so the sum is greater than the whole, or some of the parts is greater than the whole. And we've seen this time and again, and the other thing is tech is not about or, it's an and.
- Matt Baker: Always.
- Patrick Moorhead: I recently got back from a show from a company who does mainframes that have increased MIPS 50% from the prior year. So not a whole lot of mainframe, there's one mainframe producer out there, but we live in ands, not, ors. And when you step back and realize that some of these biggest enterprises, they might have five to 10,000 applications that have been written over a period of 50 years, you truly understand the challenge that they have to move. And I'm very excited about what the future has to hold, I'm super stoked about decentralized learning and decentralized analytics.
- Matt Baker: Oh, absolutely.
- Patrick Moorhead: I think that is a huge thing. To your very pragmatic points on latency, you can't bend time. Even if you put a fiber optic cable from the edge of a McDonald's all the way up to a hyperscale data center, there would still be latency. And by the way, it'd be really expensive and make absolutely no sense to pump all that audio information and all that video information up to the cloud. As for Dell, I've been watching you guys for as long as you've been... 30 years, I guess, and where Dell I will affirm that you guys do well when you see the challenge and you see it's apparent how things work and it's super complex and dirty, this is where Dell does great.
- Matt Baker: Absolutely. We're at our best. Our mission is to, in essence, democratize technology, and that's where we are. We talk a lot about digital transformation. A lot of people are like, "I'm getting tired of that word." Well, just look at it this way, it's technology fueling business innovation. And if you say that's not happening, then you're hiding under a rock. It's what got us through the pandemic, I hope we're through it soon, but you get what I'm saying. It's the essential ingredient for the modern world. And it's going to help us solve so many problems and challenges around the world and unlock the potential of everyone. We're at our best when it's all about distributing that, and decentralization is an opportunity to do the same thing.
- So we're really excited about it because it just unlocks a lot of inherent advantages of what we've built over those many decades. And I think we're also, I would say, aggressively pragmatic. We understand that it takes a village to really ignite real innovation and we're not interested in these silly winner takes all approaches, it's better when we work together to create great outcomes and we are confident we'll benefit from it differentially, but also we'll bring a lot of other folks along with us.
- Patrick Moorhead: One thing that it's also another truism about Dell that I've learned is that if Dell shows up and offers something, there's a market there and customers want it. Sometimes keeps y'all from being the first to announce, but you have it, maybe you've been doing it. Very similar to power protect and all the ransomware stuff, you've been doing that as a service for a decade.



Matt Baker:

Absolutely.

Patrick Moorhead:

Unbeknownst to many, but this is the challenge for analysts such as myself, to make sure we're educating people, to make sure they know what reality is. Matt, thank you so much for coming on this Six Five Summit, you've definitely been additive here and been a great conversation. I think people are going to enjoy it. Thanks for coming on.

Matt Baker:

Well, thank you and thank you for everything you do. We need to help educate everybody and you're a super important part of that. And I really, really appreciate everything that you do, and frankly I appreciate your friendship that we've had over the years, so look forward to chatting more going forward.

Patrick Moorhead:

Thanks, Matt.