

Rajiv Ramaswami:

The cloud has become the top operating model for most companies, especially during the pandemic. What does cloud mean for a company's bottom line and are there new nuances driving these cloud decisions.

Jason Lopez:

That's the CEO of Nutanix, Rajiv Ramaswami. On this podcast, a conversation between Rajiv and his friend Martin Casado, a general partner at the venture capital firm of Andreessen Horowitz. Martin has worked at Lawrence Livermore Labs, for intelligence agencies working on networking and cybersecurity, and while at Stanford in the PhD program – when Rajiv knew him – developed software defined networking. Later they also worked together at VMWare. Their conversation starts with the trends in cloud computing.

Martin Casado:

I think it's important for everyone to remember that we're still actually in the early days of cloud. Depending on who you ask the cloud market is what \$300 billion a year right now. Most estimates suggest that's growing 20% a year on year, and that will go for the next almost decade. Right? So if you compare that to the \$3 trillion IT industry, it's a very large market, but it's still early. And with that is we're still just starting to understand the implications of cloud. Like we know the benefits, we know like agility, we know, you know, we know the benefits, but we're just starting to understand the actually the economic implications. And it turns out for some companies, actually, this is fairly significant. And so we're entering an era now and I would view this as almost like cloud V2, understanding where there's a lot of discussion around like, what is the right architecture for cloud? What is the right cost for cloud? How should I use cloud in the correct ways? And so I think this is kind of where we are with the cloud adoption cycle.

Rajiv Ramaswami:

I agree, Martin. So to your point, I mean, I've been seeing lots of companies taking on public cloud initiatives and when we talk to their leaders, they talk about scale agility and the speed of development and being able to bring out new applications quickly. All that is not a surprise. I think that's perhaps a little bit less of an understanding of the true cost of cloud. Now you had a front seat position here. As you sit on the boards and you've invested in a number of these bond in the cloud companies, uh, software companies and SAS companies that really started doing everything in the public cloud. You published a fairly controversial paper here around the true cost of cloud here. and also talked about it as a bit of a paradox. I think you call it a trillion dollar paradox if I'm not mistaken. And, so what were the key findings?

Martin Casado:

Yeah, sure. So, so like, like you said, I sit on a board of these companies I've seen, you sit there on these board meetings and you're like, wow. You know, like 50% of our cogs, 70% of our cogs, 80% of our cogs are cloud, what's going on. So to understand this, we looked at 50 public companies, the majority of which the vast majority, which IPO in the last six years, and, and we spelunk through S ones. And we asked the question, what percentage of cogs is cloud? These are software companies, right? Uh, and it turned out that it was 50%, which is just a number, right? And then we asked the question, listen if 50% of the cogs is cloud, if you reduce that by a factor of two, which is totally doable in many cases, how will that impact the share price of these companies? And across the 50 companies that we talked to, we

estimate between a hundred to \$200 billion is being suppressed, which is like, this is like, this is \$200 billion across 50 companies. And by the way, the trillion dollar paradox is that, you know, if you extend this, we were just looking at 50 companies. If you extend this industry wide, it's very easy to come up with 500 billion to a trillion dollars. And so, listen, we're just starting to have companies that IPO that are heavily reliant on the cloud. We're just starting to understand the economics. And the result is, is that it makes up a large portion of cogs and that greatly greatly suppresses the the share price unless you're able to drop it.

Rajiv Ramaswami:

So are you suggesting Martine that these bond in the cloud company is actually repatriate workloads on-prem.

Martin Casado:

So, it's interesting is when we started the work for the paper, the research for the paper, the goal was just to do a cost analysis. We didn't even want to come up with suggestions about you, listen, how much, you know, how much of a company's economics are driven by the cloud? In these conversations and we really talked to dozens, many companies we spoke to says that they've either repatriated or do repatriation. And so, you know, we don't take a position, however it is being done today, and it is being considered today. And clearly there are cost advantages if you do it right. And so in the large continuum of solutions, whether it's optimize better or buy a third party tool for visibility or push it so your engineers think about costs or repatriation. We think it is something that customers should have in the conversation. It should be part of the conversation.

Rajiv Ramaswami:

So we've got about 20,000 plus enterprise customers who are starting to donate in a different way, right. They all started with on-prem data centers and almost everybody there is looking to use the public cloud. What advice would you have for these companies as they go to the cloud and what should they be looking out and learn from the lessons of all your SAS companies?

Martin Casado:

So this is fairly obvious, but it just, it's so important. It bears repeating, which is optionality is critically important. Um, and the right way to do that is upfront is multi-cloud. And it just seems to be already a reality. I mean, HashiCorp just did a survey, which shows that 76% of companies are already multi-cloud. Bank of America had a CIO report that basically said the same thing recently. And so it's just important to realize that, just like all companies are becoming software companies, it feels like all software companies are becoming SAS companies. And if you're building a SAS service, which is really the primary mechanism of distributing software, the cloud becomes part of your Cogs and the primary way to reign that in is by having optionality on the backend and listen, this is why I think Nutanix is so trend aligned. The world is coming your way, which is cloud is not a location. It's not a company. Cloud is an operating model. And that operating model is something that you can consume is on-prem equipment, and you can consume it in a colo, or you consume it as a service over the public internet. The important thing is that you have optionality and how you consume it.

Rajiv Ramaswami:

Martin, I think what you just said, outlines exactly our vision, right? I agree with you. A hundred percent cloud is an operating model. Our customers are going to operate in this multicloud world, and I think

there's an opportunity for them to do cloud right, as they move forward and learn from the lessons of all these companies that have been in the cloud. So wonderful having you with us, Martin, thank you so much and all the best.

Martin Casado:

Awesome. Thank you.

Jason Lopez:

Martin Casado is a general partner at Andreessen Horowitz. Rajiv Ramaswami is the CEO of Nutanix. This is the Tech Barometer podcast, produced by The Forecast. Find more tech podcasts and stories at [theforecastbynutanix.com](http://theforecastbynutanix.com).