

Cisco Cloud Unfiltered Podcast Series, Episode 6: Reuven Cohen, Aporeto



Hear what Reuven has to say about the recent DockerCon incident he was in the middle of, the benefits of containers and serverless architectures, why NFV hasn't caught on as quickly as it might, and all the crazy things that could very well happen with the spread of AI.

- Niki A.: Oh, and we're live. All right! I don't know what's up with Google Hangouts today. A few issues. That's all right. We have an awesome guest with us today. My name is Niki Acosta, I am the co-host, and today, solo host, of Cloud Unfiltered, where we talk all things cloud.
- And I've a got a great guest today. Someone that I know for a long time. Part of the OG, Clouderati, digital provocateur, entrepreneur, startup guy, [00:00:30] AI nerd. I don't know, there's like this never ending list. Author, you write for a bunch of publications. But Ruv, I guess I kinda introduced you. Introduce yourself!
- Reuven C.: Well thanks. It's like having a boxing promoter introduce me. An OG clouderati, I think that's the name of my next rap group.
- Niki A.: Yeah! I was looking at your Twitter stream this morning cause I was like, yeah I don't know what Ruv's been up to, I need to like do a little homework. And I had no idea that you are a digital artist also.
- Reuven C.: [00:01:00] You know, a long time ago, I guess I discovered that there was a lot more money in developing software than there was in creating art.
- Niki A.: Ahhh.
- Reuven C.: Yeah, so back in my first job, back in the 90s, I was a graphic artist. And back when designing CD-Roms was thing. And yeah, I liked doing it and now I just mostly do it for the Instagram sort of thing. But yeah, it's a fun hobby.
- Niki A.: I'm so out of the loop on all that. My sister was like, "Do you have a copy of CS6 for [00:01:30] a Mac?" And I'm like, isn't it all cloud-based now?
- Reuven C.: It is.

Niki A.: She's like I'm running Sierra. Can you get me one for Sierra? I'm like "No".

Reuven C.: Yeah, it's funny cause it's all ... Well it's sort of cloud based. The Cloud Creative Suite is like this thing you download, you kinda - it's pseudo cloud.

Niki A.: It's awesome.

Reuven C.: Yeah.

Niki A.: It's super awesome. But I have not kept up on my skills. Every time I log in, there's like new stuff, and I'm like, what is that? And then I'm like, Googling stuff.

Reuven C.: I've been on an After Effects kick, where I've [00:02:00] been doing sort of weird video 3D things. But to be honest, the coolest stuff is all on your phone now anyway.

Niki A.: Yeah, like what?

Reuven C.: Well, a lot of the little videos and graphics, and things I do. I have an iPad Pro and a little pen, and I just kind of doodle and create these sort of crazy little graphics. It's all on my iPad.

Niki A.: Do you love your iPad Pro?

Reuven C.: Yeah, it's good if you want to do graphics. It's got the best apps for that kind of thing. All the little videos and that kind of stuff.

Niki A.: Cool. So we [00:02:30] got off track a little bit. That's okay. But we typically like to start these podcasts by asking how you got to be where you are. And I say "where you are" because I don't feel like that's a current destination. Like you're doing so much all the time. But how did you get into tech to begin with?

Reuven C.: Well, that's a long long ... So I was born at the right moment. You know, so when I was graduating high school, the Internet had just basically become a thing. You know, 1994. [00:03:00] And essentially, I was looking at what I was going to do my life, and everyone else was like, had no idea. I determined that being a freelance web developer was the thing. It allowed me to be creative. It allowed me to do something that no one else could do. And it turned out the timing was absolutely perfect.

So I quickly started doing these web development gigs. Basically these kind of fancy websites back in the 90s. Which, when I say fancy, the bar was pretty low. So my specialty was something called DHTML. Which was [00:03:30] basically Javascript to sort of make the webpages animated, essentially. And that became a thing. And so I started traveling around as like an 18 year old, to different places all around the world and doing websites. And that started to be a thing. And I had an option at that point to go to university, college, or whatever. And so I took that money and started my first company, which was a horrible idea, I might add.

But anyway, the first company was to do video streaming technologies, in 1998. [00:04:00] And essentially, the average person had like a 28.8 baud modem. We had trouble with this earlier. Imagine doing that on a dial-up modem. Needless to say, it wasn't the best idea. It was a good idea, just about 10 years too soon. You know, it's probably 12 years before YouTube even existed. So you know, a little too early. And that led to a whole bunch of crazy projects, including stuff for like Napster and others. And ultimately we did a bunch [00:04:30] of work in the video streaming department for corporate financial companies. All of which existed in one building in New York. And that building went down. We went bankrupt. I picked up a book on how to program for Linux.

That brings me to the starting of my company, which was the one that actually did well. Not bankrupted me. Which was a company called Enomaly, started in 2003, to essentially optimize the deployment of open sourced technologies [00:05:00] around virtualization. We gave it a fancy name - elastic cloud computing infrastructure. Circa 2003. And everyone said you're crazy, that's insane. One, no one really got virtualization, so trying to pitch a virtualized environment when nobody really even got really an automated regular environment, was a bit early. So it took a while, and people started coming around to it. Being open source always helps because other interested [00:05:30] people started to use it. And we pretty much rode the wave ever since.

Niki A.: Man, what a great wave to catch. When I was in college, I was a field producer for MTV's Loveline, with Dr. Drew and Adam Carolla. Do you remember that show?

Reuven C.: You know what, one of my first website projects, when I was doing the video stuff, was for an MTV project called SonicNet. And it was like, I guess one of the first kind of video ... No, sorry, radio I should say, soft of Spotify-esque kinda website.

Niki A.: [00:06:00] That's super cool. So they sent me a videophone, and it plugged into the phone jack in the wall. And my job was to recruit people from the UT Austin Campus and be guests. So I setup like a little studio, but I was just thinking about how archaic that seems at this point. I mean it was a big phone, that a little screen in it, and the resolution was horrible. It was super terrible. There were always challenges with sound and video coming through. [00:06:30] And I guess they expected it on the show, because on the show, it's like all the videos looked like that. But that was my sort of first foray into digital media. And now, you know, my kid will pick up my phone and call my mom and video chat with her. It's just ... It's crazy that it's happened [crosstalk 00:06:49] amount of time.

Reuven C.: While we're reminiscing, I was just thinking the other day about the first time I had a smartphone or something like it. Back in 2001, I bought this device called the Compaq [00:07:00] iPAQ. And it basically looked like an iPhone. And I was sitting on the subway in Manhattan, playing with this thing. And this woman next to me says, "What is that thing?" Oh I'm like, it's my iPAQ. And it turns out it's Sarah Jessica Parker.

Niki A.: No kidding!

Reuven C.: Yeah seriously. And so I met her for about five seconds on a subway because of this little device.

Niki A.: Did you know who she was right away? So [inaudible 00:07:27] Google her.

Reuven C.: You know back then, I think she was hot [00:07:30] on that show. You know Sex and the City. So yeah, everyone knew who she was at the time.

Niki A.: That's so funny. Riding the subway. Probably doesn't do that ... I don't know, does she do that now? Good for her.

Reuven C.: She did back then.

Niki A.: So I was watching your ... I was checking out your stream and something interesting happened to you last week. And we were talking about this just for a second before the show started. I said, save it cause I want to talk about it on the podcast. But I think it's a pretty interesting [00:08:00] thing. Do you want to talk about what happened at DockerCon?

Reuven C.: You know, what I'm gonna say isn't meant to beat on Docker. They're a startup. Startups make mistakes. But this was a big mistake, and it ended up being a big deal. So, as you know, I like to sort of broadcast wherever I go, so show the world what I'm doing. Talking [inaudible 00:08:21]

industry people. Kind of like what you're doing right here. So I do that a lot of tech conferences. And I was at DockerCon doing pretty much the exact same thing.

And [00:08:30] one of their more junior people, I guess now that I know the background, came up and basically shut me down. Said, "You can't broadcast. You don't have broadcast authorization."

And I was thinking what is that, like the FCC or something? I need to go and get authorization? And anyway, she said "Nope, you can't broadcast." And like, well, can you make an exception? Those guys over there are broadcasting. It was like, "No, no broadcasting for you."

Okay, being that I like to tweet, I tweeted that I've been shut down by the social media police. [00:09:00] And Alex Williams over at The New Stack sort of came to my support, retweeted. At which point, the folks at Dell EMC saw the tweet, and then retweeted it. And then the story goes that they went over to the Dell EMC guys and said, "Hey, can you remove that tweet? Not cool to be promoting that kind of stuff." And they basically said no. And then we could do better. We can actually take all of our funding [00:09:30] as well. Which is like, you know, Dell EMC being pretty much the biggest tech firm on the planet at this point. I don't think they meant the threat, but still, it's the A-bomb of threats, if you know what I mean.

At which point I felt, it became kind of an interesting story. But it hadn't blown up quite so big yet. So I went on to my Facebook page, and I like to share sort of anecdotes of my various exploits and things that I do around the world. And so I wrote basically what I just told you in the form of a Facebook post. [00:10:00] At which point I think Ben Kepes did a screenshot, posted it on his Twitter, and then the thing exploded. And people all over started tweeting it, and it became kind of a 15-minutes of controversy.

Niki A.: And that's so interesting, because I feel like I've never experienced that at a conference before. But you know, I was watching an interview with Dave Chappelle. And he was talking about how he doesn't want people live-casting his performance [00:10:30] because it kind of ruins the jokes for everyone else who might pay for a ticket later on down in his schedule. But as far as like a personal device capturing like a Periscope, or you know, a Snapchat or something, I've never heard of that before. In fact, I went over to the DockerCon code of conduct, and I didn't see anything that would prohibit anybody from, kind of casually opening their phone and doing an interview or something of the likes.

And so I'm wondering now, like is this [00:11:00] something that we're gonna start to see at conferences? Like what is the risk to conferences? Maybe I could understand if it was like a live talk or something like that, but as far as being on a show floor in a convention center in whatever city you're in, I wouldn't ever think that popping open your phone and doing a live Periscope would be something that would be punishable with sort of being kicked out or whatever.

Reuven C.: Yeah, seriously. One, these tech conferences are kind of boring. Like let's be [00:11:30] honest. The show floor isn't exactly a hotbed of entertainment. So one, I do it for something to do. Because otherwise I'm just standing around having the same old conversations. Two, it's a reason for people to come to me and it's a way for me to meet other interesting people. And three, you want to promote the things that are happening. If you are a conference, why wouldn't you want someone to go out and say, "Hey, I'm at ABC conference doing some cool stuff."

There's not really much downside to it unless you [00:12:00] purposely do something to make it negative. So I think that a lot of these companies, a lot of these conferences, they spend a lot of time in what they describe as influencer marketing. And they want to invite these types of people. People who have a targeted audience for one reason or another. They don't have to be the Kardashians of the world, but I've got a pretty geeky audience. It's not the hugest audience, but it's also not the smallest either. So it's a mutually beneficial type of thing. At least I think it [00:12:30] is. So shutting someone like me down just doesn't make any sense.

Niki A.: I love that you don't live down your digital provocateur name. Good night! I wouldn't want to make you mad at a conference. If I was an organizer, I'd be like, hey, you know-

Reuven C.: I wasn't trying to be like that. I'm not a sociopath. I have feelings and other people have feelings. People are affected by things I say. I get it. I'm [00:13:00] not going out of my way to make people's lives difficult. But when a story appears on a silver platter, I just can't help myself.

Niki A.: Where are you living these days Ruv?

Reuven C.: Well, I was in Toronto for a while. Sorry, I was in Seattle for a while, now I'm back in Toronto. I'm Canadian, so it turns out being a Canadian in the U.S. isn't as streamlined a process as I would've hoped. So here I am back in Canada, but I'm all over the place. The company I'm working with is in San Jose.

Niki A.: [00:13:30] Tell me the name of that company again cause I kept typing it wrong.

Reuven C.: Yeah, I know it's funny. It's called Aporeto. It's a startup. We're like the world's worst stealth company. I think we are technically still in stealth until someone tells us otherwise. But I've been heavily promoting the thing so I guess stealth is one of those terms that probably means not too much at this point. We focus on securing container technologies, specifically around Kubernetes and things like that.

Niki A.: So let's talk about just cloud and containers, and [00:14:00] all that, because obviously you've been involved early on as a clouderati, an OG clouderati. You've been living in this cloud world for a really long time and it's interesting to me because I've seen some people just kind of hit the ground, embrace cloud, and start running. But then I'm also seeing companies that are just now getting around embracing cloud. Meanwhile, a bunch of other people are off to the races doing containers. Tim Crawford says we need to take a break, because [00:14:30] people just can't stay up to date on what's happening in tech. But what are your thoughts on cloud? You've seen OpenStack, AWS. There's Google and Azure now. There's all kinds of container technologies. What are your thoughts on the state of the union for cloud in general?

Reuven C.: Well, we're on the third generation of cloud when you think about it. So in the early days, when we first started, it was essentially an API on top of some hypervisor and virtualization. And doing that through [00:15:00] the means of scripted automation. And then the next generation, we saw sort of the emergence of containerization. And being able to quickly spawn applications in a sort of fast flux, you know I need machines for a small period of time, and I don't need them to last more than a minute or two, rather than days or weeks.

And now we're going into the third generation, where we see things like serverless architectures, where it's events-driven. Things last for seconds. Underneath [00:15:30] it, it might be a container, but ultimately, that's all sort of obscured from view. So you're right. You're an enterprise saying what the heck is cloud? It's three things at this point. Right? And it's evolving so quickly that they hadn't even gotten their mind around the first generation of cloud, before the second and third took off.

Niki A.: Sure. And as far as containerization goes, I think there are still a lot of folks who struggle with that. And [00:16:00] now we're talking about serverless architecture. What are the benefits of having containers and serverless architecture? For folks who might be new to this third, or fourth concept of cloud. Of what's yet to come. What are some of the tangible benefits of moving to containers and serverless architectures?

Reuven C.: Well, it's speed, for one. The challenge with a traditional VM-centric approach, [00:16:30] is the time it took to deploy and manage that was longer. It wasn't hugely long. It wasn't like deploying a physical server, but a lot of these sort of architectures around micro services and serverless, are about events. Something happens and I respond to it immediately with a series of containers

that do something. The things that they need to do don't happen very long. They don't need to exist very long.

So when you're spawning something - I have a sudden workload that needs to be analyzed, or [00:17:00] I've got a sudden spike in something or other, I need a thousand containers for two minutes. That's the approach. And when you're spawning a thousand machines, a thousand VMs, it could take you five minutes to spawn, if not longer, if you're lucky. By the time five minutes has passed, that job is done and gone and dead, in micro services architecture.

And so containers don't have that sort of ... Are better at short life cycle, like applications.

Niki A.: And who's [00:17:30] using containers successfully at this point?

Reuven C.: There's a lot of focus on what I think we were calling a couple years ago, the composable architectures. Still, the companies that are doing it best are still the biggest. Funny enough, you know? Like the Googles of the world. The Netflix and Amazon uses this within almost all the applications that they build and deploy for their new services. So they kind of practice what they preach within that.

So unfortunately, the best examples of these applications, are in [00:18:00] terms at scale, are probably the biggest companies. Which is ironic. The other companies that you're seeing use these types of architectures, are the companies that are emerging in the AI space. Companies that are using advanced intelligence. These kind of black boxes of intelligence that'll do things like neuro nets, and understand things that are almost un-understandable to humans. Which is another challenge. But they're using these types of applications as well to sort of save money cause it would take huge amounts of compute, but need to do certain things very [00:18:30] quickly.

Niki A.: And I read some of the things you've written lately. Specifically around AI and just how the threshold of influence that these AI-driven applications have over your life without you even knowing about it. How scary that is. You think people realize it at this point?

Reuven C.: Well, you know, probably the best early example of that, it would be credit card and credit card fraud, right? It knew [00:19:00] that you were spending outside of your normal spending habits. It would call you and say are you sure you are in some foreign country doing this transaction? Well no, I'm not. I'm at home.

Now, the scary part is, you can apply that basic idea to just about anything. It could do psychological analysis. Hey, let's look at the people most likely to buy, or not buy, or do other things like that. So I think one of the scariest things in terms of politics and how this is used, is in [00:19:30] the use of apathy. So it's not getting people to do something. It's getting to do nothing, that has the greatest effect. And if you look at political movements, now it's like if you can convince a small segment that the person that they were most likely to vote for is not worth voting for, it means they're not gonna vote for the other guy, but they're not gonna vote for that other person either. Which means that it's just enough to push that other person into a win.

Niki A.: Which is super scary.

Reuven C.: Yeah, it's terrifying, right?

Niki A.: Terrifying.

Reuven C.: It's apathy as a weapon.

Niki A.: [00:20:00] Yeah, and it's interesting too when you talk about just all the dynamics that are happening in the world. I guess being Canadian, you probably have a slightly different maybe take on it. Because Justin Trudeau is super awesome.

But I, like you, took a lot of interest in that Cambridge Analytica company. I thought it was super fascinating, that they were able to micro target and be able to just tell kind of what your habits [00:20:30] were based on the pages that you've liked. That's scary.

Reuven C.: There's also, if you look at what's happening with social media, Twitter, Facebook, things like that. And the ability to manipulate those algorithms to your benefit as a social media influencer, for the lack of a better term. It's crazy. So for example, I'm interested in this type of stuff, so I did a test.

Basically responding to Donald Trump tweets [00:21:00] with just stupid pictures and stuff. To see what responses I would get. And what the takeaway was, was this: If I could respond with just like a picture of something stupid to a Donald Trump tweet within the first 30 seconds, I could get four, five hundred thousand views. If I waited a minute, it would go down to about a hundred thousand, which is still good. If I waited five minutes, it would go down to about twenty thousand. If I waited ten, basically nothing.

Niki A.: Interesting.

Reuven C.: So, yeah there's like this velocity associated with these [00:21:30] algorithms, right? So speed ... It's almost like if you look at financial trading, the speed in which you can do a trade directly relates to how much money you can make. And stuff like that. The same thing is kind of happening in social media. There are these really complicated algorithms. People are particularly good at determining how these algorithms work. Machines, on the other hand, are awesome.

So it's almost like if you can, I don't know, reverse engineer these algorithms, you can reverse engineer the people that these algorithms are connected to, and then influence [00:22:00] those people.

Niki A.: Have you ever had a conversation about something completely random, and then like within a few hours, an ad for that random thing shows up in your Facebook ads?

Reuven C.: Yes, re-targeting. There's a fire hose in both Twitter and Facebook and things like that, that allow you to do demographic profiling.

Niki A.: I'm talking, like talking to a person. Like in real life.

Reuven C.: Oh that's terrifying.

Niki A.: It's happened to me like three times in the last month. That's why [00:22:30] I ask.

Reuven C.: I don't know, but hypothetically, I don't know of any technology that does this, but hypothetically, let's say Siri is listening in on your conversation, and could pass that information. I sure as heck hope that isn't happening, but yeah, that's terrifying.

Niki A.: Ruv Cohen likes chocolate. Let's see what happens.

Reuven C.: Yeah. The other thing that you could do is, in sort of character assassinations, and stuff like that. The ability [00:23:00] to find the weakest point in someone's existence to take advantage of, to basically bring them down. There's so many terrifying uses of this technology.

Niki A.: Oh, you're scaring me. I believe in the goodness of people. I think good things are coming for all of us. But it does present a lot of interesting opportunities, both for companies who use technology, and companies who provide sort of security, analytics, like all of these backend operational things under the hood. [00:23:30] In order to make money, and to survive, and to make sure that their reputations are intact. Right? So I think it's interesting.

Reuven C.: There's another shift happening, which is even more interesting. So you always hear about these mundane jobs that are going to be replaced by bots and AI. The truck driver being the prime example. But what's interesting, is there's been this shift towards creative pursuits. Things like music and art and other [00:24:00] things that are now being created by bots. So what's worrisome is once this technology sort of gets embedded into the more creative side of the world, what does that mean for us?

Niki A.: As a siren goes by.

Reuven C.: Yeah. Did I set that off?

Niki A.: No, that was an actual fire truck cruising in front of my house.

You were talking about Mobile World Congress I think. I was watching one of your videos, but you were talking about NFV too, and kind of what [00:24:30] the state of NFV is. And I work at Cisco, who sponsors this amazing podcast. Ding. But I'd like to get your thoughts just on NFV in general. It seems like something that's been around for a while. It seems like something that doesn't have mass adoption. It seems like something that a bunch of different people have different opinions on, but why hasn't it taken off? As quickly as we thought it would.

Reuven C.: It's too complicated. From a ten thousand foot level, who wouldn't want a virtualized network? Make it easy, programmatic, software-oriented. All those things make [00:25:00] sense. The challenge is, keep it simple and stupid. And that simple and stupid hasn't really trickled down to the average deployment of these things. It's still complicated. The real question is, do people want traditional networks anymore? Do they care about all these various layers? Do they just want something that just works? And is secure. Is that layer seven? Maybe. Is it layer three? Probably. Is it all [00:25:30] of the above? Yup.

So the question I think in terms of limited adoption, is in the complexity. And the complexity is complex for complexity's sake. It's almost like it needs to be complex so we can justify, and I'm not pointing out any vendor or anything, to justify the existence of some of these people who put that technology out there. So I don't know, my-

Niki A.: There's like elements of self preservation in not transitioning to technologies that "just work".

Reuven C.: [00:26:00] Yeah, it just needs to work. If you look at some of these container platforms that have become popular over the last year or so. Kubernetes probably being the best example. They focus on, I don't even know what the right adjective is, but super simplicity. You tag it, and it magically works. You know? You don't need to get complicated. You want simple. The complexity only adds the potential to introduce [00:26:30] problems, whether it's security exploit, or some other problem that will be human induced.

Niki A.: It's interesting you bring up complexity because I talk to a lot of customers just to get kind of a feel of where they're at in terms of cloud and automation, and everything else. The one thing that I hear over and over and over again, is that they just have too much stuff that's based on the old stuff to be able to make a clean break to newer stuff. Like they've got so much technical debt and [00:27:00] they've got so much invested in these traditional technologies, that just simply moving from one to the other, is not a good option for them.

Reuven C.: Well sure. They said the same thing about mainframes. And who's got a mainframe right? There's always a reason why not to do something. I've got too much invested in the old way of doing it. I own a horse whip factory, there's no way I'm going to invest in cars. Right? There's always a reason [00:27:30] until there is no reason not to. Or you're out of business.

I'm sure there was a reason for Blackberry not to do the iPhone. But they missed the boat.

Niki A.: Right.

Reuven C.: So I would say, just because you've always done it that way, or you've spent a lot of money doing it that way, doesn't necessarily mean it's the right way.

Niki A.: So would you expect, let's say a large enterprise, to completely re-architect their applications? Or a large telco to have to re-architect how [00:28:00] the data is traveling through their pipes and their network of pipes? It would be like essentially, the way I think about it is, infrastructure has been a big thing in the U.S., right? On the campaign trail and now in real life. But our infrastructure is crumbling, and everybody knows we need new infrastructure, but it's such a complex and big task. Like you can't just blow up all the roads and start all over again. You know? You've got to plan it out, and map it out, and make sure that you've got alternate routes [00:28:30] and blah, blah, blah.

At what point do you say, enough is enough? There's not always [crosstalk 00:28:37] transition, right?

Reuven C.: Yeah, any of your more right-leaning listeners are gonna probably call me out on this, but I'm gonna say it anyway. When it starts affecting kids in Flint, Michigan, that's when you do it. Before, hopefully. So was it worth it to poison a whole generation of kids because you didn't want to spend a couple hundred million dollars fixing the water? [00:29:00] That's what we're looking at. The infrastructure is not infinite. It doesn't just last forever.

Niki A.: Right.

Reuven C.: It needs [crosstalk 00:29:07], it needs to be fixed, it needs to be updated. Whether that's some pipes with lead in them, a highway, a telecom infrastructure, none of this stuff is going to stay as it is today. It's all gonna need to be upgraded.

The question is, do you do it today? Tomorrow? Or when the thing collapses?

Niki A.: Or you wait for a company to come in and build all new infrastructure and just flip the switch and move to that infrastructure, [00:29:30] right? Or that provider. Or that option. I mean, I don't think anyone expected ... I know Uber is the most overused kind of example of companies that are disruptive, but I don't think anyone expected Uber to be as disruptive, as quickly as it was to the taxi industry, let's say.

Reuven C.: And the reason, beyond the fact that they do some questionable tactics around management, why they work were, is the use of algorithms. And use of understanding [00:30:00] the flow of things. Those things happen to be people in cars, but they applied advanced machine learning, understanding to things, that no one had ever really understood from that point of view. And say, hey we can optimize the logistics of this system, through the use of advanced technologies.

Now, the question is, how many other industries can we apply those types of advanced algorithms and understanding to? And disrupt, revolutionize, whatever you want to say, to them? My [00:30:30] guess, is just about all of them. I think there's huge amounts of inefficiency in just about every aspect of our society. And that doesn't just limit it to making money. That's just about all aspect of it. That's, why do we get up in the morning? What do we live our life for, type of stuff.

Niki A.: Yeah, I wonder a lot. I think a lot about the future. My whole M.O. is to look like I'm from the future. Just so you know. But I'm wondering how different our kids' lives will work [00:31:00] than ours do presently? Like right now, I walk into my house and I flip a light switch. And I've got now the ability, with smart lighting, to do geofencing. To where I can just walk in my house. It knows I'm home and it automatically turns the lights on for me. And I can imagine walking from room to room, and stuff just comes on as you need it. And that doesn't seem that far away.

Reuven C.: No, it's accelerating. I think the fundamental [00:31:30] challenge our children will have, is an existential one. What's the reason, what's the purpose of all this? Is it to get up and do a job and make money? Do you need to do that when there is a number of AI system that could probably do that job hundred, or a thousand, or a billion times better than you? At that point, what does it mean to be a human?

Niki A.: You fall back on your digital art career. Unless that's taken over by robots, in which place you might move into a cave and write on some walls? I don't know.

Reuven C.: I don't know. That's [00:32:00] the challenge, right? So what we're seeing is the first steps of that. We're seeing you know, my kid getting on the phone when he has a question he asks Siri. That would've have even existed before a few years ago. When he was born ... He's probably the first generation that will never know what a smartphone wasn't, right? It's always been around.

And the integration of these technologies into their lives is really interesting. And I'm [00:32:30] not necessarily saying it's a bad thing, but it's certainly gonna change the way they interact and perceive technology, for sure.

Niki A.: I just saw an ad. I think it was attached to one of the articles that you may have tweeted. I think it was on Mashable, but it was about the new Honda lawn Roomba. It basically, you plop it down on your yard. It has anti-theft stuff built in. You press a button and it mows your lawn.

Reuven C.: Yup.

Niki A.: And I was like, man, wait how much is that? And I started looking online [00:33:00] and I realized there's a whole bunch of companies that make these. And then I realized, for what I pay my lawn guy in four months, I could just get a robot to do it.

Reuven C.: It's true.

Niki A.: And that puts me in a conundrum. I'm like man, I think my lawn guy is about to get automated out of a job. And I think about these industries. But I also see that there's people out there who are really investing in companies that have a good element of human support and service. [00:33:30] Good friendly support. So-

Reuven C.: In 50 years, there'll be businesses that pride themselves on being human. You know, literally. It'll be like 1985 again or something. Customers interact with real people!

Niki A.: Come to a bank and meet a real person.

Reuven C.: Yeah, exactly. And like, oh my god! I'm sure there'll be a point where it goes full circle. But it'll be interesting for sure. And there's gonna be a lot of change. You know people [00:34:00] talking about the outsourcing of jobs to foreign countries and what not. I'm not worried about that. I'm worried about the outsourcing of jobs to things that aren't human.

Niki A.: Right, but in a way, doesn't that entail having jobs that are behind the scenes enabling these technologies?

Reuven C.: You know-

Niki A.: Like I see a need for tech, to enable all the next generation. Like my kid needs STEM skills. He's gonna have to learn STEM skills. I think.

Reuven C.: [00:34:30] Okay I don't want to be a pessimist, cause I don't want to say our kids are not gonna have jobs or anything. But let's look at that per se. So let's say your kid becomes a programmer. What's saying that a program can't be programmed by another program? There is no reason for a human to do programming. And if you look at the advancements in programming today, most of the major advancements are happening in terms of automation. In terms of the things that programs create themselves when they need it.

And it's only logical to think within, [00:35:00] probably not too far off, those programs will be creating other programs even better than themselves. At which point, do you need a human to do the programming at all? I would say no.

Niki A.: I don't know. I think there's a human element. There needs to be human input. Just because, I don't know, maybe if there is a mass scale of artificial intelligence that has emotional consciousness, then-

Reuven C.: There's a series of companies that have come out, that are doing [00:35:30] emotional intelligence based analytics. I think company is called Resitivity [phonetic 00:35:37]. And what this company does, is they've got an API that essentially will look at a person and a series of things they write, and understand their psychology. And then be able to adapt based on that psychology.

So I've got a bot that I use from a company called Zoom.ai, and it tells me basically every morning, what I'm going to do for the day. And not only does it tell me that I've got a meeting with Niki at 3 o'clock, [00:36:00] it actually will do a psychological analysis and tell me how best I should interact with you. Apparently, according to this, it thinks you're an extrovert. Wasn't exactly a-

Niki A.: You don't say.

Reuven C.: It wasn't exactly a stretch, you've got a podcast.

Niki A.: You don't say.

Reuven C.: Yeah, you don't say. But it gave me a whole slew of overview of your psychologic-

Niki A.: What else does it say about me? I'm curious.

Reuven C.: It says I should let you talk. You, know, stuff like that. And it's best to ask you a few personal anecdotes, [00:36:30] questions. And so it goes in and give me sort of an idea of how to interact. Obviously I know you, so [inaudible 00:36:36] them, like well that's obvious. But imagine for someone you've never met before. It gives you just a little bit of an edge when trying to sell a new deal or-

Niki A.: I've got a lot of podcast guests coming up that I've never met before. So I might need to get me some Zoom AI. Full disclosure, you're an investor in Zoom AI.

Reuven C.: Oh yeah, you did [inaudible 00:36:54]. Yes I am an investor. I invest in a lot of AI things. AI is a hot space. I figured hey, if I'm gonna get replaced [00:37:00] by AI, I might as well be the investor in SkyNet. You know, I don't know.

Niki A.: Yeah, put your chips on red, and black and green. You're gonna hit it somewhere. Not a bad gamble.

So we talked a lot about the future, but presently, what new technologies are you following? What are some of the things that are coming to fruition that are like, yeah, good stuff.

Reuven C.: I'm very intrigued [00:37:30] by the accessibility of neural nets. So before TensorFlow and some other technologies came out, it was ridiculously hard to create smart things. That level of complexity is going away. So I'm now able to look at things and analyze things much more easily than I think was possible in the past. So I'm really into finding competitive advantage in areas that other people don't have competitive advantage in, by doing that kind of analysis.

[00:38:00] So I think anything in the neural net space is particularly interesting.

Niki A.: So you're using neural nets to figure out what companies to invest in?

Reuven C.: Yeah, exactly. I use neural nets to figure out everything I do. Whether it's investing in an ETFs, or pure peer-to-peer lending, or the next up and coming companies to invest in, I just run it through the various ... I like the one from Google, but there's several others out there as well that basically just pop a bunch [00:38:30] of information, I put in a Google spreadsheet the information I have, and it basically will tell me the output.

Niki A.: That is crazy awesome. I'm just happy to have Waze, when I'm trying to get my kid to school. You know?

Reuven C.: Yeah, Waze is awesome too.

Niki A.: Yeah, I want Waze for my life. That's cool.

Reuven C.: That's Zoom.ai. Check it out. It's Waze for your life. It'll help you navigate those things in life, right? It'll make suggestions. It'll tell you leave early or don't forget about this, don't forget about that. All that kinds of [00:39:00] stuff. Wait till it helps you keep your marriage on track.

Niki A.: Oh my marriage is good. I don't need all that.

Reuven C.: Well you know, me, I'm on the road half the time, so I might need a little-

Niki A.: Send wife flowers right now.

Reuven C.: It's smart enough to know that she prefers a purse or shoes, or something.

Niki A.: Oh, really? Is it like going into her Facebook profile and [crosstalk 00:39:22] her stuff.

Reuven C.: It doesn't do that yet. I'm saying-

Niki A.: Or go into her Pinterest board and seeing what she's pinning.

Reuven C.: Oh yeah, right.

Niki A.: Yeah, lucky [00:39:30] us. Well there are worse things that can come from AI. I know of a few men in my life, and women, that could definitely be reminded of their anniversaries and birthdays, and other things.

Oh man, it makes me feel dumb. But you know what I was thinking about while we've been talking about this too, is I'm looking at the curriculum for my kids in first grade. And he comes home, and he brings his homework home. And it's really not that different from the homework I used to do. And I'm wondering to [00:40:00] myself, because you were mentioning if your kid has a question, your kid asks Siri. My kids have been asking Siri all kinds of stuff. I'm overhearing stuff that I shouldn't be hearing, right? Or maybe I should be hearing and saying, "Hey, don't say that."

But my kids are asking in their own voice, "Hey, Siri, XYZ." And getting answers and finding webpages. And I'm like man, should we be teaching our kids kind of like this Googlable knowledge? [00:40:30] Should they be memorizing Texas history? Should they be learning about it? You know, what version should they be learning?

Reuven C.: I've got a son in second grade as well one in the first. And so it sounds like our kids are around the same age. And it's terrifying, right? It's like I don't want to go into details of what they're looking at, but let's just say I stumbled into their room one day, and they were asking Siri questions that no six year old should be asking. And it's like what in the world is going on here?

So then I'm [00:41:00] in a position where I have to explain to them, well that's not appropriate. You can't ask those sorts of things. And then I'm trying to figure out how to lock this silly thing down so that doesn't happen again. But yeah, it's strange times we live in.

Niki A.: You know Meraki can help you with that. Ding. No, honestly, so the co-founder of Metacloud will be joined, and I think we get a pretty awesome discount on Meraki. And I should probably order one cause it looks really cool. But you can actually import these kind of block lists that are kept up to date, that are open [00:41:30] sourced, that are out there. And with the click of a button, import them into your Meraki. And it will, by device, you can actually set parameters on what your kids have access to. And add to block lists and manage which device should get priority.

So if my kids are all streaming and playing video games in their room, and I can't download my magazines, I can say hey, give me priority and bump them down. Really, really cool stuff. But you were talking about ease of use, and that was one of the more impressive things. And I noticed that there have been some companies that have come out with specific [00:42:00] devices that are aimed at kids tablet use. To monitor time, to monitor websites. It's hard now, because there are so many devices. Like you pretty much have to account for everything.

Reuven C.: Yeah, and there's a hand-me-down system in this house. So they basically get my old phone, minus the sim card. And then I try to lock it down the best I can. And it kind of trickles down to the youngest. I don't know about a four year old having a phone, so I've been sort of holding off giving it to [crosstalk 00:42:27].

But yeah, [00:42:30] you're right. If it can block Siri, then that would be awesome. And while we are on these self promotion, I get a lot of networking gear from various people who want me to try it. So I'm always happy to try it, and let you know what I think.

Niki A.: Oh, got it. Ding! I'll talk to my friends at Meraki.

Reuven C.: Yeah, exactly.

Niki A.: It looks pretty cool. I've had friends that have installed it. And I just haven't ordered it. I'm not a networking geek. Like I can log into [00:43:00] a router and screw everything up. And reset it back to factory and start all over again. That's about as far as I can get. If there's a YouTube video, I can do it. But Meraki looks pretty slick. It looks pretty easy.

Reuven C.: It does look pretty nice.

Niki A.: So, Ruv, we have talked about a lot today, but tell us ... You and I, thank you, agreed to join a panel that I'm hosting at the Redhat Summit in Boston in a few weeks. Where else are you gonna be? How can people get a hold of you? What [00:43:30] should people follow? @Ruv. What else?

Reuven C.: Well, I spend way too much time on Twitter. Next week at Redhat Summit in Boston. The week after that, the gracious folks at Dell invited me to fly out to Vegas and spend some time with their crew. I hear there's like a Ferrari/Lamborghini race. That should be interesting. Rough life, I know. And after that, I'm going to GlueCon.

Niki A.: Sweet.

Reuven C.: Which is a pretty cool developer conference. I think in, just outside Denver.

Niki A.: What's your favorite conference?

Reuven C.: [00:44:00] I don't know if I have a favorite. It depends what you're looking for. If you're looking for raw party capability, the best one probably now is AWS. They get the biggest group of cloudy folks anywhere. Lots of parties. I like more ... I like smaller, you know, tech things. Like in the events that the Cloud Native Foundation have been putting on recently. They've done a pretty [00:44:30] good job. It's not too big. Really smart people, the right people.

Obviously, GlueCon is always a good one. Lots of smart developers up there that goes to those things. Again, I guess for meeting people, smaller is better.

Niki A.: Yeah, Monktober Fest is probably my favorite conference.

Reuven C.: Oh okay. I've never been. I've heard good things though.

Niki A.: You should go. It's amazing. And they bring it, with the food and the craft beer and the ... It's amazing. It's a good one.

Well we look forward to seeing you. I know we talked about a lot of things today. Sometimes, we're on topic, [00:45:00] and sometimes we're not. But we're always unfiltered and you are probably one of the most unfiltered guests that I will have, ever. So thanks for letting me pick your brain on a variety of random subjects, Ruv.

Reuven C.: Yeah, no problem Niki. Thanks for having me on today. I really appreciate it. And maybe next time, I'll have you on my podcast.

Niki A.: Yes, I would love that. Folks, don't forget to subscribe to this podcast. You can follow Ruv, @ruv. You also have a website. What's your website? Ruv.net?

Reuven C.: Yeah ruv.net, but most of the stuff I do these [00:45:30] days is on Twitter, so that's the place to be.

Niki A.: Find you on the Twitters. You're posting a ton of really deep content, digital content, which is very entertaining. So thanks for that.

Well, that concludes today's podcast. We've got some more guests coming up, so stay tuned for more. Ruv, say bye.

Reuven C.: See ya.

For More Information

Find more [Cisco Cloud Unfiltered podcasts](#).

Learn more about [Cisco Cloud solutions](#).



Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

Cisco and the Cisco Logo are trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and other countries. A listing of Cisco's trademarks can be found at www.cisco.com/go/trademarks. Third party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1005R)

Printed in USA

04/17