



Daniel Newman : Tom Anderson. Welcome back to the 2022 Six Five Summit. I am so excited to have you once again here at our event.

Tom Anderson: Thank you, Daniel. It's great to be here.

Daniel Newman : I love that. I love the people that come back. It creates such a great opportunity to look in the rear-view, talk about what's happened, but then, of course, we're in technology, so we're future people. The past, it's a bunch of indicators of things we need to think about as we build out towards the future. It has been a year since you and I have sat down for one of these conversations. I'd say the world's in a slightly different place. Mobility is up, we're seeing return to work. There's still certainly some hiccups, so we're not completely out of the woods yet, but I think the topic of automation has really come into focus. That's where you spend the bulk of your time thinking, Tom, so I'm curious, what are you observing right now in terms of company's perspectives regarding the importance of making investments and deploying automation?

Tom Anderson: Yeah, so I think when we talked a year ago, I think there was still a bit of a mindset of when things get back to normal, and I think that what we've learned is back to normal is who knows what? Between pandemics and global conflicts and supply chain interruptions and all of the other things that are going on in the world right now, I think this is a new normal, right? So, companies are adjusting to that environment and saying that the only way we're going to be able to deal with this level of unexpected change is by having a system and an organization that adopts automation.

So, what I've seen is companies that we work with, particularly the ones on the leading edge, we have more and more companies moving along the maturity spectrum, or the maturity curve of automation. I've seen three themes within those organizations. One is at the top, real leadership investment in automation, not just a CIO saying, "We need to automate everything," but really leaning into automation, identifying leaders in his or her organization that will be responsible for this measuring automation in the organization, measuring the outcomes, the outputs, making sure that they're having the business outcomes that they look for. That's one.

Two, we've really seen a lot of different pressures on ops. The ops teams in the organizations are starting to think like software developers, not be software developers, but think like software developers. That means adopting some of the same disciplines that we've used in software development for years, whether that's source control, peer review, automation is code. It's not just infrastructure is code, it's kind of ops is code, so we've really seen that mindset within the operations organization changing to be like software developers.

Then last but not least, which is the pressures on the organization where the human capital, the human resources piece of it, organizations aren't able to find the people that they need and they need to re-skill the people that they have and so uplifting the skills within organization and adopting some of the disciplines or the aspects of open-source communities internally in their organizations with communities of practice, to share best practices, to share automation across an organization, so I've seen those three themes, particularly in the organizations that are really pushing and succeeding at automation right now.



Daniel Newman :

Yeah, I'm really glad that you mentioned that macro-environment. Even in the last couple of months, we're seeing a pretty significant pivot. We've got these pressures mounting where you have this super-low unemployment number and workforce challenges, so the tech industry has especially been at almost a standstill of trying to acquire the talent it needs to grow. But at the same time, we've sort of got this macro-environment where you're like, interest rates are high, inflation's high, you've got policy being put into place that's trying to slow growth, and so if you're a company, right, the kind of company that works with Red Hat and that deploys automation, you're at this point where you're trying to decide, "How do we go forward, make the right investments, but make sure we protect our business and the event that there is a downturn?"

Because one thing we have definitely seen is that there was a rapid expansion that took place despite the challenges of COVID and we haven't really seen a slow since this automation boom has started to take place. So, you've got to find the skill, you got to find the talent, but part of my thesis has been that there's just this extremely deflationary narrative behind automation, that companies that want to really protect their bottom lines, but at the same time, continue to deliver great customer experiences, keep their systems running effectively and efficiently, being able to manage new infrastructures and new modernized architectures need to think about automation. You're looking at automation for experience consistency. You're looking at automation to work across your environment, which by the way, has changed over the last few years. We've seen a lot of more hybrid cloud, multi-cloud, that's where everything's going, right? In your opinion, how have customer environments changed in this past year or two in order to really enable the next wave of automation?

Tom Anderson:

Yeah, so a couple things have happened. Customer environments have expanded in multiple directions. One is multi-cloud is a reality. We used to talk about hybrid cloud and then hybrid cloud being a combination depending on whose definition you're using, some combination of on-premise and off-premise compute infrastructure. What we've really found now is that most of our customers have adopted multiple hyperscaler providers, they have multiple data centers, so multi-cloud is a reality.

Then the second piece is innovation out to the edge, right? The edge is playing a more and more important role in organizations as they look to innovate, connecting directly with their customers, enabling their field operations teams to be able to be more efficient. So, we've seen both of those dynamics happen at the same time, and what that has done is it's stretched the internal operations teams to be able to adapt and be able to... Look, if you have to automate infrastructure and applications on two or three different hyperscaler providers, multiple data centers, multiple edge platforms, and if you're going to use bespoke tools for each of those things, you're not going to be able to keep up. So, we've seen operations teams really looking for systemic automation platforms that can automate across all of those environments.

I mean, as you said, organizations just can't find additional ops people to come in. They can't expand ops at the same rate that they're expanding on innovation and so the only way to make that equation work is to make those operations teams more efficient. Automation has been the



key to that. That's what I'm seeing. I'm seeing both dimensions of multi-cloud and edge pulling at the center.

Daniel Newman : Yeah, I'm glad that you pointed that out. I also think there's sort of an expectation of ubiquity, right? Where the workload is placed continues to be less important to the business experience, right? Now, to the IT team, there's a ton of thought that goes into all that, and of course, if you're an architect or a data center, if you need the data center, you don't want to necessarily hear that, but when it comes to how a customer engages how an application needs to be able to access data, how a process gets automated to seamlessly enable a transaction, or to seamlessly enable an IT environment to cure an issue, the concern is uptime, the concern is runtime. The business needs to function.

I think that's been one of the big transformations that's gone on, and so edge to cloud, while it's been a great marchitecture for a long time now, it's actually becoming imperative to the business. So, one of the things I always love to ask, Tom, is when someone like yourself not only leads a team, but really engages closely with the most important customers in your organization, what does success look like? Especially in these multiple environments that are pre, multi-cloud, how do companies sort of evolve their automation strategies, make sure that the edge is part of the thought process so that the location really starts to matter less, like I suggested?

Tom Anderson: Yeah. Well, let me give you an example, Daniel. We just did a project at a large energy provider here in the US and they were rolling out a new application platform on their oil platforms, field platforms out in the field, so human-machine interface application. Traditionally, that's been proprietary systems, very closed proprietary systems that just provided data to a backend system somewhere. In this case, this was a modern modernized application, application components running on that device at the edge communicating with data center components, and sharing data with an application that was running on Azure, so it really was a modern kind of multi-tier application, but at the edge. That's a different environment for the typical teams who manage those industrial edge environments, the OT teams versus the IT teams.

What this organization was doing was bringing the IT disciplines that they've worked on so much over the past few years in terms of automation and bringing that out to the edge environment. So, while it was a relatively simple application, there were still eight to 10 different components that needed to work together to be brought together to make that application real, no IT people are standing out on a oil platform anywhere managing these environments, and so our automation platform, Ansible, became the glue that knitted all this environment together and allowed that organization, not just to deploy it, but to update it, and to keep it healthy throughout its life cycle.

I see that change where these different silos of technology teams within an organization, the cloud team, the storage team, the database team, the OT team that's managing these edge environments, these things are starting to be blended together, if you will, right? So, what is one of the kind of common threads that you can, that you can tease through that environment, which is automation, and if you can do common automation platform across all of those environments, you'll make each of these teams more efficient.



- Daniel Newman : Yeah. These stories are always a really interesting way to hear the tie together in a real-world industry and application. Obviously, energy top of mind, right now.
- Tom Anderson: Yeah. We need more of it.
- Daniel Newman : We do not have enough. Anybody that's been to the pump, I mean, this event, these are prerecorded, but only a few weeks ahead of the event, and I think people are tired of paying a hundred dollars for their Civic for gas. Serious, though, creating more efficiency for these energy companies is valuable. I think it's a little bit of a tangential topic because I'm not sure automation will get passed on. Even if it does make companies more efficient, I'm not sure we're going to benefit from that. But I do think that these companies being able to deploy this scale edge to cloud multi-cloud is really important.
- Now, I do want to ask a follow on to that, though, is what is the measurement of this? I find it to be interesting, but I'm guessing your customers eventually come back to you and say, "Okay, we're starting to be able to realize ROI. We're investing upfront, and as we deploy these, we're seeing better results," whether those are ROIs or uptime ROIs, whether those ROIs are bottom line, but I mean, I imagine these projects all have to come back with some sort of, "Hey, we invested this." It's like building a factory. Now, it's going to start driving returns to the organization.
- Tom Anderson: Yeah, so I've seen two areas for ROI measurement, which is the speed with which things can be rolled out, day zero provision, how long does it take you to roll out a new environment to one of these, or a new application, and its dependent infrastructure out to one of these environments? That's been the historical measure of saying, how efficient is our automation, which is how much can we automate day zero?
- But what I'm seeing now is a lot more, what are the benefits from day two automation? Reducing the cost of ops, I think you mentioned it reducing the downtime. I think the scales are tipping a little bit because we've really plumbed the day zero automation area pretty hard and now we're starting to shift over into day two ops. How can we make those environments more efficient? How can we support more of these environments with the same number of people? How can we measure uptime? How can we measure security events? All of those types of things are starting to weigh in now on the cost of operations for day two in these environments and so we're really future-focused on those on that as well.
- Daniel Newman : Yeah, I think that's a great thought process, Tom. Basically, what I think is going to happen is we see a lot of proof of concept go to scale is that this is going to become board level. This is going to become governance within an organization that automation must be a key part of your long-term strategy. It's about the upskilling and upleveling your employees, giving them the next wave of investment in your organization, and also talent because it's kind of like one of those things I think we've used it as a talking point for a long time, Tom, like, "Oh, we're going to upskill our workforce. We're going to re remove the mundane. We're going to..." But the truth is that if we want to continue to build, we want to grow the economy, we want to expand our organizations, you have to put your talent to the best possible use.



So, what I always like to end this kind of conversation is, a little future-forward, right? What happens next? I feel like what I just said is sort of indicative of a large swath, companies are in varying levels from proof to small deployments. Of course, there are certain processes that have been automated for a long time, but this whole organizational-wide edge to multi-cloud automation across everything that can be automated at scale is still a little bit nascent for most organizations. So, what's the next wave? Is that what it is? Is it going to be deployed at scale? Then how do you see the general economic and secular environment playing a role in speeding this up or impacting how fast we move forward with it?

Tom Anderson:

Yeah, just a quick comment on the economic environment. I'm no economists, but the clouds over the horizon look like things are going to become a little bit more conservative here over the next little while as opposed to agility and speed and innovation. Maybe that scale will even out between cost and efficiency. So, we see a lot of that happening and where I see things going over the next little while, particularly in automation, which is where you really get to taking people completely out of the day-to-day operations of an environment. They become the exception as opposed to the rule, so automation becomes the rule, manual becomes the exception. We see that in event-driven architectures particularly.

Of course, I'm the automation person, so I think of it in terms of event-driven automation, so these event-driven processes and architectures where there is no human interaction at all, where you start really connecting AI and ML systems with automation to take actions on events in an environment that happen without any human intervention, so really, I see an up-ramp over the next couple years for event-driven automation supporting event-driven architecture. So, that's one area.

The second area, and this has always been important, but it's becoming more and more important all the time, which is security. What is this? At Red Hat, we're talking a lot about the secure software supply chain. I'm talking about the secure automation supply chain, where again, if it's automation is code, do you know what that code is? Do you know the Providence of it? Has it been manipulated? Is it either been manipulated by accident or maliciously? What you're automating, or how you're automating it, is that really how you want to be doing it? So, are we being able to secure that automation supply chain from point-to-point. I see both of those kind of vectors really moving out in the future.

Honestly, I think Daniel, the edge stuff is really just getting started. I know edge has been around forever. It's a new way of talking about it, but innovation at the edge, open-source at the edge, breaking down proprietary systems so that innovation can reach associates in their jobs at the edge, in the industrial edge, in retail, et cetera, engaging directly with customers. I think there's a lot of innovation that's going to be happening there, and without automation, that just isn't going to happen. So, I see at least those three things happening over the next few years.

Daniel Newman :

Yeah, absolutely. The edge has some very significant applications that you've mentioned that I think are worth pointing out again. I mean, the telco edge in 5G is going to be massive, the manufacturing and industrial environment. I mean, we're wrapping up here, so I don't want to go too far down this rabbit hole, but when you talk about things like the metaverse and



omniverse, the edge is actually this huge opportunity, whether it's simulation and autonomous vehicles and how we're going to be able to build smart cities of the future and being able to create building environments for... I mean, we want to think about it through NFTs and art and gaming, but the opportunity that this is going to have, but you need to have almost no latency, you need to have really strong uptime, you need to have great levels of connectivity, you need developers that can build apps to take advantage of these environments, and you need a very robust edge that is as dependable as the hyperscale data center, or on-prem data center.

So, this is a big story I would say to be continued, Tom, but it is very exciting, and I do think to your point of how you started the answer to that question about the environment is I think the concern about slow down is actually going to be a huge accelerator for the investment in automation because if companies want to keep going, but want to hedge risk, you invest in technology. That's what's always happened. Whether it was 20 years ago and moving to the internet and creating web, I mean, it was it. Even just during the pandemic, the way we moved our businesses for supporting more e-commerce, or remote interactions, and hiring, we are nimble. When the macro-environment creates risk, tech is actually usually what we use to solve that risk. So, Tom Anderson, Red Hat. Love having you back at The Six Five Summit. I can't wait to have you back on the show, whether that's next year, or sooner. Thanks so much for joining me here.

Tom Anderson:

Thanks, Daniel. Thanks for having me. I enjoyed it.