



Architecting the Cloud, part of the On Cloud Podcast

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Episode: Title: Think you know DevOps? Think again.

Join host Mike Kavis as he sits down with Jayne Groll, co-founder and CEO of the DevOps Institute, to talk about DevOps--what it is and isn't, and what skillsets are needed for DevOps success. Mike and Jayne also discuss DevOps and change management, and how the human element plays a critical role in helping DevOps transform, not only IT, but the organizational culture as well. Finally, they engage in a lively debate about what a DevOps Engineer is--or whether they even exist.

Duration: 0:23:50

Operator:

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Welcome to Architecting the Cloud, part of the On Cloud Podcast, where we get real about Cloud Technology, what works, what doesn't and why. Now here is your host Mike Kavis.

Mike Kavis:

Welcome to Deloitte's Architecting the Cloud podcast. I'm your host Mike Kavis and I'm here with Jayne Groll, CEO and Founder of the DevOps Institute. Jayne welcome to the show and tell us a little bit about your background and about the DevOps Institute.

Jayne Groll:

Hi Mike and thanks for having me today. Really excited to talk about some things that are going on in the industry. So my background is I've been in IT a fairly long time, so I've had an opportunity to see some of the evolution of technology from a business perspective over probably more years than I want to admit to. DevOps Institute was formed in 2015, really to address a growing and emerging trend as DevOps started to cross the chasm from what we originally called the unicorns into more of the enterprise space. So when we started to look at all of these emerging practices and how big DevOps was getting, there was automation aspects, cultural aspects, integration, process aspects, software development operation security, we realized that the need to be able to add a little bit of logic, I call it sanity, to this monster that could be known as DevOps, which in the end of the day is really IT, made some sense.

And then we also wanted to be able to create some type of global community where those that were exploring DevOps, where DevOps is a very different approach, than say ITIL or agile or lean or other where they are single bodies of knowledge. We really wanted to create a community where we could share ideas be innovative, experiment and learn, so at the end of the day creating a continuous learning environment, and then also looking at skills from a human perspective, really drove the introduction of DevOps Institute. If you don't mind, my adding one more thing. Really proud because I mentioned it's a global community, and right now from a channel perspective, we have about 160 partners around the world. so we've really been able to reach the practitioner at that local level, and again something I'm really proud off.

Mike Kavis:

Yes, I know one thing is challenging with the term DevOps is it means, is, it means so many different things, different people. A lot of clients I visit they talk about DevOps and CI/CD as the same thing, so how do you educate people on what's the breath and scope of the DevOps mindset?

Jayne Groll:

So, it's really interesting because I think for a long time, the question of what is DevOps was a heavy debate. Is it a philosophy, is it a movement, is it a framework? And I actually think the market is starting to move away from that, where there is a recognition that it isn't just CI/CD, and that, well, automation is obviously a very key aspect, and moving to the cloud again, obviously something that supports DevOps. We really need move beyond what it is, to how do we do it.

And what are all of these different aspects, and all of these critical success factors that are associated with being able successfully transform from the way we used to do things to the way we need to do them now. So, globally, it's really interesting, because there is a common thread across the world that started out with this what is it, to now, how we do it, and I think, as importantly, what else do we need to consider when we are starting to look at transformation. Because transformation is a human – is really a human process that can be replicated with automation. So, I think the market is starting to become more aware of that and I think that, when we look at transformation efforts and case studies, we're starting to see a little bit more of that as well. Are you seeing that on your side as well?

Mike Kavis:

It's a mixed bag. It depends on the maturity of the company. So, if they're just getting into the DevOps thing they're thinking CI/CD often. And if they've been down this journey a while, they're starting to see the bigger vision, and it's how do we deliver faster more reliability and still be secure. They understand that, so it's a mixed bag, but definitely the conversation is a lot easier than it was few years back.

Jayne Groll:

Yes, I agree.

Mike Kavis:

So, I want to talk about skills, because you focus a lot on both evangelizing the skills, and training, and when I think back, I've been around a little while too. I think you got me by few years, but I think I started in the mainframe all the way up to cloud, and what's really changing is what I call the need for speed, and we've gone from releasing two three times a year, to where some companies can release multiple times a day, and when you move that way, all the old processes and skills and organizational structures just don't support that. So, what are all these new skills, and I think a lot of it, tends that people can't be so siloed in their domain knowledge

anymore. And what about you? Expand, and what are these new skills and who needs to learn them?

Jayne Groll:

Great question. So there has been a lot of emphasis lately on T-shaping, where you're right, having a core depth of knowledge in a single domain isn't necessarily enough anymore. So, we have to really start to groom individuals to support their organizational goals by helping them become T-shaped. And so T-shaped, what, and if somebody is not familiar with T-shaping, what that essentially means is the stem of the T is your depth of knowledge, it's usually your core competence, the area where you have grown the most skill, maybe where you identify in terms of career. But if I'm a software developer, software engineer that's the stem of my T. The top of the T is, I think, what's the most interesting. When we start to look at upskilling, because the top of the T is intended to have a wide range of breath of knowledge about multiple skills.

So for example test-driven development is now emerging as a key trend in skilling where software engineers used to pass all the testing downstream now they're being required to learn more about testing. Do they have to be QA engineers? No, so they're not going to get two stems, but the top of the T has to be filled with a lot of broad base knowledge that really helps support the practitioner in their career growth, but also in support of their organizational transformational efforts. You know, Mike, you might know that DevOps Institute last year launched a project, a community project, to really identify what are those skills. And so we introduced a survey, global survey called Upskilling, Enterprise DevOps Skill Survey that was completed internationally by a couple of 1,000 people.

The interesting part about that is when we started to look at what was the range of enterprise from the respondents we saw a very, very heavy emphasis on those that had at least 500 employees, up to those that had more than 20,000 employees, and then at the bottom of it, we saw about 22% coming from the 0 to 99. But we look at really the enterprise perspective, there clearly is a broader view of skills than just automation skills.

Automation skill is still important, but when you started to look at the respondents, and it was pretty deep survey, started to look at the respondents' functional skills, soft skills, process skills, and automation skills really ranked very high in terms of how to fill the top of that T. Sometimes maybe filling the stem as well, but really looking at what are must haves? What are nice to haves? And what do these respondents not care about? So the report will publish at the end of the month.

Really excited that we worked with a former long-time Forrester Analyst Eveline Oehrlich, on the project, but it really shows that there some very, very key transformational skills that can either help an organization progress, or may actually be an impediment if they're missing. And if there is one message that comes out of this, is that don't underestimate the need for functional soft and process skills, because the alignment of process is, I think, is either an enabler or constraint when we start to look at DevOps.

Mike Kavis:

Yes I think where I see with clients process the killer, right? We can always find technical people who can figure out how to script stuff and automate stuff and build stuff, but if they're building on top of broken processes, how much progress they're really going to make? So, we talk a lot about value stream mapping and I've heard you, I was at the NewOps stage, the first on California some place, I think.

Jayne Groll:

In California, yes.

Mike Kavis:

And you were talking about value stream mapping so what is – why do we recommend value stream mapping, and first of all what it is for people who may not know, and second of all why is it so important as we transition from the old world to the new world?

Jayne Groll:

So value stream mapping really is a deceptively simple exercise in identifying not only all the tasks that are associated with value creation, so from an idea or need all the way to the delivery to the customer. So it really kind of segments out what are those tasks and how long does it take to accommodate those tasks. But it also looks at the time between tasks. So, the goal is to be able to visualize what is this stream that occurs within an organization, from an idea to customer value realization, and how do we start to look at being more efficient to shorten the timeline?

So, you mentioned about speed and quality. Those are really the two key metrics when we look at value stream mapping, right, how long is it taking us to deliver value and what is the quality associated with that value creation. So it also kind of breaks metrics down into kind of an interesting approach that says at the end of the day, those are really the only two metrics that count, and everything else that you do and you measure has to be able to support that. So I said it's deceptively simple because, at the end of the day, most

value stream maps are done with sticky notes, right? We get a bunch of engaged people in a room, a really skilled facilitator, and they start to really map it using sticky notes and they negotiate, and they debate about how much time not only the test takes, right, and what's associated with it but what about the timing between. So we start to look at handoffs, and we start to look at being able to reduce that, and I think at the end of the day what's really interesting about value stream mapping is that you start with a current state.

Now we can all kind of fictionalize current state, but we have to know where we are today and then you do a future state map. You have to know what good looks, like right, where should we improve, can't improve the entire value stream? But you know in kind of the theory of constraints, if you improve one part of that pipeline, you likely improve all of it so, so a really critical exercise. I think organizations don't necessarily pay enough attention as a starting point on value stream mapping, that if you don't know where you are, how do you know where you're going?

Mike Kavis:

Yes that's one of my favorite sayings if you don't know where.

Jayne Groll:

Right, just walk around in circles right.

Mike Kavis:

If you don't know where you're going how do you get there right? So on the value stream, a lot I've been through a few of these exercises, not as a facilitator, because that's not my skillset, but as a participant, and a lot of the steps in the process really needs to be eliminated. So an example is, I was involved in one, the use cases was it's a brand new app, what are all the steps from getting people on-boarded to, getting ID's and network IDs, all the way to building code. And to a point, and a lot of the steps in there, when the people started talking, they're like why does this exist, and it winds up that 15 years ago, this horrendous event happened, so they stuck in another check. So my advice when we look at this is to look at ways to eliminate ways, look at eliminating steps. You don't always have to accommodate all the steps that are in there, but have you seen something like that?

Jayne Groll:

Absolutely, and sometimes the steps are done twice, right, because one team does it and then another team does it. Or sometimes there's unintentional bureaucracy that's built into a step. So I come from an ITIL background, and so the number one question I get asked is about change management. So when we start to look at that value stream the question is, okay we put in a request for change two weeks in advance, but we can't because we're going to release in two hours right? So you start to look at, okay what made sense a year ago, five years ago, 10 years ago?

What makes sense now, and for example, in change management, it's more important to record the change or request the change. And at that point, I think when you start to have that negotiation that says do we really need to do these blameless postmortems, really taking on kind of a cultural shift that says if we say we don't need to do this anymore it's not because you're not valuable, right? It's that we want you to acquire in your skill, or we want you acquire a new mindset. So it's a very human element of value stream mapping. There's a really human element to transformation. I like to say that culture doesn't transform; people transform, but they have to be inspired. So, that's a part of it. I mean that comes down to the – how do we get rid of things we don't need to do anymore and how do we keep humans happy about that?

Mike Kavis:

Or do them differently, right? So there's a lot of reasons why change management makes sense, but now that everything is code, knowing what assets we're using, knowing impacts that can all be automated, right, through tagging, through automatically calling for using service now or some CNBB. We can automatically fill it out. It's just there's nothing wrong with ITIL; the concepts are good, but how do we use those concepts in the modern day right? And I think that's why there is so much resistance. The ITIL folks are like, you're not going to do any of this anymore, and I think the reality is we just need to do some of the stuff differently.

Jayne Groll:

Yes I call it minimum viable process.

Mike Kavis:

There you go.

Jayne Groll:

Right, right.

Mike Kavis:

That's an MVP I can sign up for.

Jayne Groll:

Yes, there you go, there you go.

Mike Kavis:

So let's go back to the skills could we focus a lot on IT but is there a need to reskill product teams and business owners as well?

Jayne Groll:

I think so. I think that when we look at the term upskilling, right, we use to call it cross-skilling, and we still do to a certain degree, but I think when we look at the term upskilling, IT can transform, but the business needs to transform as well, and there's some really interesting case studies of organizations that really went bold in terms of how they approach transformation from a business perspective, as well as an IT perspective. But if IT starts to transform, and the business doesn't, and the skills that are associated, say soft skills in particular, that we're really encouraging IT professionals to be able to acquire. If those same skills aren't matched on the other side, on the business side, then we're not going to move any further along, right?

We don't need the business to become technical experts, sometimes I think in IT, that our expectation that they know what we're talking about has probably been very unrealistic, right? That's my specialty, it's not your specialty. But being able to create common vocabulary, being able to have good process skills, right, process crosses the entire organization. Product management crosses IT into marketing, into sales, and so, and product development, and so on and so forth. So we have to be able to have a common set of skills and we also need to look at what are those skills, right?

What are those skills that go beyond the automation, technology skills, and how do we encourage the business to acquire them as well? Unfortunately most of us grew up in an organization, I call it "on the street," meaning our management skills we might have – we might have gone to school for that, might have gotten a degree, we might have gone to training. But somewhere along the way some of those skills that are really necessary, negotiation skills, process skills, really being able to look at data skills, those are really key skills in order to be able to understand how do we deliver faster. Because at the end of the day, every company is a technical company right, regardless of what your core product is, and I think that mindset is starting to become clear. It'll be interesting to see five years ago whether that mindset has really kind of infiltrated into business.

Mike Kavis:

And I think I've been using my psychology skills there. It's like a therapy.

Jayne Groll:

Reverse psychology sometimes, right.

Mike Kavis:

Alright, so last question one of my least favorite terms is DevOps engineer, because in my opinion DevOps isn't a person or a role, but the term is, – has kind of caught on, so I'm kind of in my old age kind of letting things slide. But a lot of firms are hiring DevOps engineers now, and I think you've uncovered a bunch of research on this topic, so share with us what your learnings are studying this term?

Jayne Groll:

So, I'm with you. I think the term DevOps engineer is mythical, meaning that because we don't have a standard for what a DevOps engineer is or isn't, that it becomes very, very difficult, in an environment that's so dynamic, and so many organizations are starting to at least walk down their DevOps journey. They're all reaching out to higher DevOps engineers, and unfortunately with DevOps engineers, I could self-declare as a DevOps engineer tomorrow so could you, Mike. So, there is no way for a hiring organization to validate whether I am actually a DevOps engineer or not. And again, most, I think, see it from a CI/CD perspective, using the word engineer, and whether we like it or not, DevOps engineers are here to stay. The data that's coming out of the survey really does demonstrate that the market has accepted the term. But what the market is also looking for is a little logic behind the term.

What are we engineering in DevOps and what is this role? Is it a leadership role, is it a technical role? Is it a coaching role, and how do we create some sanity behind that? From my perspective, and it'll be interesting when the data is released in the report later this month. From my perspective, a DevOps engineer has to be all of the above, right? A DevOps engineer has to have good soft skills, good

process skills, good functional skills and good technical skills in order to be able to be that kind of T-shaped professional that DevOps needs in order for transformation.

So if we start to look at DevOps engineers, there's only I know Jenkins, or I'm a software engineer, test driven software engineer. That's not enough, right? That's not enough, particularly when organizations are actively hiring, and we see salary surveys that DevOps engineers are earning a lot of money. So my hope would be, and I'm really hoping the industry will start to embrace this, that a DevOps engineer is the consummate T-shaped professional, right? They have some security experience, they have leadership experience they have continuous delivery experience they have testing experience, they have good soft skills. So that when they go into an organization, they are transformation advocates, but they are also part of that cultural transformation, because they're so well rounded in the form of being T-shaped, so that would be my hope, I mean what do you think about that?

Mike Kavis:

Well that term drives me nuts, because it basically says DevOps is CI/CD, right? I like to call them IT automation or automation engineers or something. A lot of the skills we just talked about are the same skills you expect in the developers building the applications, and as we look at where a lot of the companies, especially the mature companies, are moving, there is no separate DevOps team anymore. You have two teams that do everything right? They may have specialists on their team who are in CI/CD, but at the end of the day it's a team. And so I don't like it, but I've gotten over it. I had a presentation once about, no you're not a DevOps engineer, and I was comparing them to like Bigfoot and other things, but I've gotten over it maybe.

Jayne Groll:

So, it would be interesting to see how the market evolves. I think we're in really early stages and I think transformational efforts for many have started but haven't necessarily progressed, and you know, I think you know, Mike, at DevOps Institute, we credit seven certifications that are very skill specific, and we intentionally stayed away from DevOps engineer, because, as I said, earlier, it's a little bit mythical right now. But at some point, I think we're going to need, whether it's DevOps Institute, or the industry at large, is going to need to put some type of structure around what actually qualifies as a DevOps engineer, if the markets going to keep hiring them.

Mike Kavis:

Well a lot of them are just calling themselves SREs now, so maybe we can use that. Just kidding.

Jayne Groll:

Yes, topic for a different podcast right.

Mike Kavis:

So Jayne we really appreciate your time today – where can we find you on Twitter, and where do we go to find some of your presentations on this and the DevOps Institute material?

Jayne Groll:

Well thank you for asking. So on Twitter I am @JayneGroll. And I really love to engage with individuals on Twitter as well.

DevOps Institute has a free community, so I would encourage those listening, come to www.devopsinstitute.com, join our community for free. We have a select channel, like you learn more about certifications. We have a lot of presentations and content out there to encourage Continuous Learning.

Mike Kavis:

Awesome, well that's our show for today, you can find more podcast like this by me and my colleague Dave Linthicum just by searching for "Deloitte On-Cloud" Podcast, we'll see you next time on "Architecting the Cloud".

Operator:

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