openSAP Invites, Episode 16

LEARN ABOUT DEVOPS & THE BENEFITS FOR SAP ENVIRONMENTS

Transcript

Elisabeth Riemann: Welcome to openSAP Invites, I'm your host, Elisabeth Riemann, and today we're learning all about DevOps with SAP experts Dirk Lehmann and Boris Zarske. Dirk and Boris demystify the term DevOps and explain in refreshingly practical terms what it actually means and how by adopting this approach, we can increase the all-important agility and quality of our development projects. Whatever your role and experience, this episode will shine a light on the key aspects you need to know. Stay tuned to learn from their extensive SAP developer experience, lighthouse projects, and the latest openSAP course "Efficient DevOps with SAP". Dirk Lehmann is DevOps evangelist and continuous delivery expert at SAP. In his current role, he's part of the CI/CD Product Management Team, helping SAP product teams on their own CI/CD and DevOps journey. Since 2001, Dirk has worked in various roles at SAP in the area of development and operations. Together with his former team, TwoGo by SAP, he established the first continuous delivery implementation at SAP delivering value daily to customers. Dirk is a frequent speaker at international conferences on DevOps and continuous delivery and is co-organizer of DevOps Days Zurich. Boris Zarske is product manager at SAP in the Cloud and Lifecycle Management area. He's responsible for DevOps and lifecycle management topics related to SAP Business Technology Platform. Together with colleagues from other areas, Boris is forging the overall DevOps story for SAP. He has broad experience in system provisioning topics and enterprise architecture, and he's a regular speaker at SAP events such as SAP TechEd. Let's say hello. Hello Boris.

Boris Zarske: Hi, thanks for having me.

Elisabeth Riemann: You're very welcome and hello Dirk.

Dirk Lehmann: Hi, Lizzie. Good morning.

Elisabeth Riemann: Good morning. Welcome, both of you, to openSAP Invites. Thank you so much for being our guests today so that we can all gain a better and more

practical understanding of DevOps and what it actually means for end-to-end development projects. Now, DevOps is a term that we often hear together with agile software development and talk of overcoming traditional silos and the associated inefficiencies they stand for. However, I think it's probably fair to say that DevOps as a coined term applies to much more than just development and operations. So, I'm really looking forward to learning from the both of you what it truly represents. So, to our warm-up question to set the scene, what's your own personal experience of working in development team, so both with and without DevOps?

Dirk Lehmann: So, I had the pleasure to work in a team that somehow pioneered DevOps working approach at SAP some years back, and I was overwhelmed how much productivity we could reach by at the same time increasing our quality and lowering the stress level for everyone in the team. And this was really eye opening to me because I was working at that point in time already like 10 years in the software industry. And I never experienced such a high-profile working method that allowed us to do high quality deliveries in such a frequent mode and really ship value to the customers that is really at the customer's hands in really fast time. So, we gained the feedback from the customers in sometimes in the same week. And so, we knew how to how to go on with this or that feature so that was really eye opening. And then I started to wonder, why is that? So, why is that team performing so good? What are the methods that we are doing? And it was not all invented here. We did a lot of looking outside the company, what other companies were doing, and we just curated that and did what worked for us.

Elisabeth Riemann: That's fantastic to hear that it brought such efficiencies and it was really great value for the customers, too. Was there any resistance within the team initially?

Dirk Lehmann: In the team not, inside the company. And now comes this young team of new-minded people and say we change the way we work dramatically to what we've learned in all the years before. And they thought like you're crazy. What will happen to you is like you will see quality will go down and you will learn that releasing is a pain and you don't want to do releases quite often because they are a pain. So, what you are trying to do here is not a good idea. And we said, but everyone we talked to in the industry, like outside SAP, says it's a pretty good idea. So actually, quality should go up and stress level would go down. And there was the point where you could see a lot of

people scratching their heads or like, I'm not saying laughing, no one laughed at us. But a lot of people tried to protect us from doing mistakes. I think this was a very important step for SAP, having a lighthouse showing no, if you're following certain rules or following certain ideas, this really can be done even inside a SAP, because for sure, we were not the only ones who came up with this idea, but we were like the lighthouse proving everyone wrong, who said this can't be done in business software. It's hard to understand that when people talk about value stream and about end-to-end and including business and the security and the quality and the designers and what have you like, everyone who's working on that value stream should be incorporated in an approach that, from its name, implies that it only targets to the development people and the operations people and said, yeah, it's just because of its history. Right, this is how it started. But it soon turned out that we need, we want to overcome the silos between development and operations and then found out it's not only the silos between the both of them, it's the silos between everyone on the value stream.

Elisabeth Riemann: And when we talk about teams generically in the rest of this interview, what kind of team are we talking about?

Dirk Lehmann: So, the one thing is the team size and the other thing is like which roles do you want to have in that team? And I think here it's what is often fostered or advertised as like the cross-functional autonomous teams. And what that means is that you that you tear down the silos and saying, OK, here I have a development team and they're the operations team and this is the business folks' team, and this is the quality people's team. DevOps is a melting pot of all the good ideas that we have since decades, added with the experiences that we that we have in the last years. And so, bringing everyone along the value stream in that team. And the value stream, and I quote John Willis here, who says, the value stream is everything between the aha moment and the ka-ching moment. Right, the aha moment, this is the idea where you where you have an idea how to solve a business need or to solve a problem of the end user. And the ka-ching moment is the moment when you are incentivized for that, either by earning money or by getting the kudos from the end user who say, finally my problem is solved. And then you just look on everyone who's working on the product or service in between that. And then you will see this is not definitely not only development and operations, but security people and quality people and the designers that do the UIs and people that are writing documentations and people for sure from the business side

and all of them bringing them at least to a virtual, but maybe even organizational wise, to one team. Then limit the size. And then you would say, but we are doing business software. Can't do this with small teams and small teams, always with magical numbers of 8 to 10, maybe 12 persons. Like this can't be done by such a small amount of people. We need more people. No, what you need is more teams. So, this is, I think, how we approach in software engineering over all the decades. First, we always thought about coming from technical technology, technical patterns, architectures, and at the very end, or maybe not at all, we thought about the team. So, change the architecture and slice and dice things so that they fit to the team size. And this is what this is why what we come to things like microservice architecture and everything the like, because we slice and dice things according following, like having always the team first in mind and later the technologies and the architecture and what have you. Basically, the idea is everyone who works along the value stream of creating products or services work together to design, operate, develop that system despite of their background or knowledge. So, it is not a thing only for techies, developers, and IT operations, and so on. But like for everyone who has some direct influence on that value stream.

Elisabeth Riemann: What does DevOps look like inside of SAP? Can you tell us more and share your experience with us here?

Dirk Lehmann: It's very heterogeneous. Inside SAP, we have now quite a couple of lighthouse projects, you definitely see really high performing teams delivering in fast frequencies of value out to the customer. You still, but on the other side, you still have teams that are just at the start of their journey. But at the end, that doesn't matter because all of them started. And I can feel since quite some years, but more and more in SAP development as a whole. And I mean, to have the numbers here, we are talking about roughly thirty thousand developers. It's really a huge development organization with all of those roles that I mentioned earlier. And you need to bring everyone in their pace, in their context on this level. And this will take us multiple more years, I would say. And so, you can really find, like every state of that journey inside a SAP. And I think it's the same what you see on the customer side. We have customers and I think you can you can echo that we're getting requests from customers who are really like doing the DevOps thing and now trying, asking, like, how can we add the SAP, that's the missing part of it, into our journey? Whereas others like, hey, we are at the very beginning, we heard of this thing. What's SAP's take on that, right Boris?

Boris Zarske: Yes, I totally agree here, that's really the situation that we're facing there when we talk with customers. And yeah, I can only confirm that.

Elisabeth Riemann: So, they're all at different stages right in this journey. What about customs that already have CI/CD in place? So, they're already partway along their journey. What's the recommended approach here that you give?

Boris Zarske: That's a common pattern, we see, right. So, many customers did look into DevOps, but then in most cases not around SAP environments and now just have the question, how to bring that all together? And yeah, I mean, there are of course, if you try to be open with our portfolio. Right. That's one of the key aspects that we want to provide there so that they can really build on the experience they made outside of SAP with their DevOps approaches and can also reuse corresponding infrastructure. We are providing certain templates for building up CI/CD infrastructures and using them around SAP projects. And one example, one of the benefits we are providing there are containerized tools that you can download from GitHub and then add to your own CI/CD infrastructure that might already be in place. So those are docker images and yeah, that's something you can use, for example, with Azure DevOps then, for example. Then, we are also providing a library of pipeline steps so you can use based on templates we are providing for typical SAP use cases that you can also download from GitHub and then extend and adapt as required. And yeah, actually we started there. We're focusing on Jenkins because we consider that as some kind of de facto standard when we came up with that also internally and yeah derived it to make it also available externally then for our partners and customers and other learners and there we are in the process to migrate those steps towards Golang. So that's programming language from Google that just also allows, again, to use them more openly also in other infrastructures. So, yeah, if you want to look into that, we are offering some kind of command line interface tool you can download there from our GitHub page and then initiate and help command and then get a list of the already migrated commands there and can use that. Pretty straightforward, I would say. And of course, we plan to come up with more concrete examples and some best practices, especially for opening up that to other frameworks as well. So, we want to support that as well, although nevertheless, of course, we have also some offerings that provide a little bit lower entry barrier, especially focusing on SAP-centric use cases.

Elisabeth Riemann: I think with these low barrier use cases, it's also very good.

Boris Zarske: Yeah, absolutely, I mean, just to give you an example, I mean, the customers come up and say, OK, we want to now apply DevOps principles in SAP environments. They, of course, have some kind of use cases in mind, be it for example, coming up with an SAPUI5 application with a compelling UI or just building an extension to their on-premise SAP systems running then on our SAP Business Technology Platform. And yeah, around those use cases, we then provide those mentioned templates they can use, and we have also some kind of pipeline as a service offering. That's a service you can go to our platform and subscribe to the service and then have a running platform for your specific SAP use case almost out of the box. So, it really takes only some minutes to set it up, actually. And then you can really, really a build pipeline and you can bring in automated tests and have that direct feedback channel then. And that's just the basis then to outline or to bring up those increments with the right quality. We also try to bring in then, of course, also the enterprise aspects into that. And then they come up with release candidates we then also allow and hand over into transport and change management, because the enterprise requirements, many of our customers are facing more strict boundary conditions, for example, for auditing reasons where they have to just see who did perform which change in which production subaccount and when, and also want to have that stored inside the system so that they can track that all the time. And there, yeah, we just bring those different aspects together as an option. It's not a must, but if customers should face those more strict boundary conditions, then we have that defined handover. And that is also something that is automated and directly integrated also into this pipeline as a service offering where you just activate the corresponding stage with that automated handover. Or if you have a more flexible approach by building up a Node pipeline, using our templates, we have corresponding pipeline steps you can then reuse for that automated handover as well.

Elisabeth Riemann: So, you have a whole wealth of different options for different customers, depending on where they are in their journey and the approach that they want to take too. And you also mentioned best practices as well so we can learn more there with those, I guess, as well. About things we should look out for the dos and don'ts and everything.

Boris Zarske: We have that really broad range of customers, so some of them have already gained experience with DevOps, some of them are really new, as also Dirk mentioned and outlined. And for those yeah applying DevOps principles might also be a trigger to first look at cloud development overall right. So, we also have to provide some kind of best practices, how to develop on our cloud environments, how to operate and the applications, and how to bring in then also hybrid aspects, because for many of those, the center of gravity will stay on-premise, at least for the next years or they will yeah, extended by a first cloud projects by time in a step-wise approach. And there we have several best practices. I mean, we have one best practice guide for the SAP Business Technology Platform where you gain insights on general aspects like compliance and cloud development and a complete lifecycle of applications running on the platform itself. So, that's a very good starting point. And for those that might already want to look into continuous integration and delivery, there's also a corresponding best practice guide. Yeah, that's just a starting point where you gain insights and learn depending on where you're coming from and gain those first insights and know where to start. I really see that very broad range, customers that really want to understand how they can do DevOps and how SAP can support them. On the other side, experienced customers that rather want to know okay how they can now bring in the SAP aspects. And of course, we have to be there for all of them. Right. And try to provide corresponding approaches. And that also reflects then the boundary conditions they are facing. Some rather focus on the cloud-native approach, some rather coming from the on-premise part and for hybrid offerings and yeah with completely different boundary conditions again.

Dirk Lehmann: There is no, like, canonical definition of DevOps and like everyone has a different understanding of what DevOps is. So, when customers approach us, I think the first thing that we always do, is or try to do is getting an understanding of what do they actually mean? Are they talking about some BTP solutions that they want to put into a pipeline, are they talking about the whole S/4, you know, rebuild my whole IT infrastructure kind of thing? Or they are talking about wanting to change my culture in a more cloud or DevOps-centric way, so to say? It's always important for us to understand what is their understanding of DevOps, trying to align that with our understanding of SAP? I mean, they've offered a SAP and I mean for sure they approach us as a software or service vendor, but we always try to tell them what, how we see it. It's like

really this end-to-end approach. So, the whole cultural thing behind that, how teams work besides the whole technical thing. But you need to understand that this is, you know, really to gain really the true benefit out of it, you need to look into it, and I think this is what we always try first.

Elisabeth Riemann: And what then typically, I guess, are the pain points that customers have when they come to you and they start to look at SAP own DevOps service portfolio. So, what's the problem? And then what's the solution? Maybe we could look at it from that perspective.

Boris Zarske: When they first look at the portfolio, it might look a little bit overwhelming, right, because we try to cover that complete range. In the end, it really boils down to identify where the customer is coming from, where they want to go to, and then, yeah, we really allow some kind of slow start and then approach. They can really start simple and then evolve if further requirements should come up or. Yeah, if they want to evolve to their overall approach or their maturity level somehow depending on their requirements they're facing.

Elisabeth Riemann: And what will be a simple first step, what will be something that you typically look at a customer to start with?

Boris Zarske: I really recommend that they, of course, first get an overview of the corresponding portfolio be it by a session with us, or yeah taking a look at the different learning opportunities we have. And, of course, you know, the now running openSAP course is always a very good opportunity here. No question about it, to get first insights and better understanding of the different options and when to consider which option somehow. Right. Because, yeah, I mean, as mentioned before, I mean, we already gave some examples there. But some customers also have invested, for example, in our strategic operation platforms be it SAP Solution Manager or SAP Focused Run, or in the future more and more also SAP Cloud ALM. And then, of course, also the question comes up how to integrate that? And there we're also offering corresponding options, like with our monitoring and alerting capabilities that can directly report into those frameworks as well. But the important point is that we are really open here, so meaning it's not a must that you have to use those approaches also for your new projects then. But if you have invested there, then of course we want to provide an

option to keep that investment and extend it and bring in also other aspects there as well. But again, we are open there also in terms of open APIs and enabling that and using that in other frameworks be it from third party providers or open source as well. But normally, yeah, you start providing them a basic understanding, then together try to derive what is really the overall pain point they want to tackle and how we can support there and what might be the right approach there. For our portfolio, we are trying, of course, to cover the complete lifecycle, so you already mentioned continuous integration and continuous delivery, which is, of course, at the heart of gaining that agility. But DevOps is, of course, much more than that. Right. And from that point of view, we really want to support the customers from setting up, getting an understanding of what they want to achieve, to really use it then for the development, but then later on also to bring in operational aspects such as really the complete enchilada then along the complete lifecycle.

Elisabeth Riemann: And what do you like most about your job and your work here with SAP and DevOps? What are you most proud of? What's, what's the best aspect of your work?

Boris Zarske: For me, the most rewarding thing of my job is really that you learn always something new. That's really something I must stress. So, it's really some, some kind of working environment where you think you can collaborate with the customers, not that you just go there and teach them something, but they bring in other aspects as well. And then you can react on that and you also have to be flexible and have to evolve your approach and our offerings as well. And that's something that you can then bring, of course, perfectly into the development teams. So, we are all on this journey together somehow as well, that's my impression. And I mean, I've never heard of a team that says, OK, yeah, we are now done with DevOps, we have completed the maturity level, you always try to yeah improve that and, on several levels, I would say. For me, that's very rewarding to yeah first of all support customers and then show them some possibilities. But on the other side, also gain something out of that and say, OK, yeah, that's a good aspect where we might have to improve as well or which we should extend as well our offering accordingly. So, that's I would say for me, very rewarding.

Elisabeth Riemann: So, it's really evolving and it's this symbiotic, really communicative approach then with customers to feed their feedback back in.

Boris Zarske: Absolutely.

Elisabeth Riemann: And Dirk, what are your highlights?

Dirk Lehmann: I would say maybe crossing borders. I mean, what DevOps emphasizes is like tear down silos, and most of my work is directed towards the internal SAP development organization and it's just extremely interesting to see the teams, their different approaches, all the products that they do. So, having, I think, there are not so many roles in SAP where you get this broad overview of the development teams that we have, the approaches that they have, the technologies that they use. And I mean, I'm a tech guy. I'm really enthusiastic about all these tools and technologies that they use and approaches that they follow. So, I think this is really what makes me curious every morning to stand up and see, OK, how is this team doing and how could we help them or where, and then also bringing that customer side, which I also do, but more as a side trick, so to say, looking in to where the customers are. And I really like this, you know, this very broad overview and crossing borders kind of part of my work to see all of this, to learn so many people and how they work across the whole SAP family. And then, as I said, also on the customer side that this is really thrills in my mind every day.

Elisabeth Riemann: That's excellent and what I really like about both your feedback and what you both said is this kind of really open approach, right? So, it's always a two-way conversation between SAP experts, DevOps experts in general, customers, internal colleagues. It really is one big community. I guess that's what it sounds like to me in many ways. And everyone's really helping one another better understand the situation that they currently have, things that can be optimized, how you can tear down silos together and really drive these optimizations in the best possible way together.

Dirk Lehmann: Definitely the perfect, you summarized perfect, exactly. Yeah.

Elisabeth Riemann: Too kind. On openSAP Invites, we really like to focus on your learning recommendations for our listeners. So, what do you recommend for our learners, for customers, and for partners who want to now take their first steps into the whole CI/CD world of DevOps using the portfolio? What do you recommend there?

Boris Zarske: One recommendation that really fits to what we just discussed here is that we also have SAP Community. Of course, there's a corresponding page. Maybe Dirk can outline that a little bit more detail because he's actually the main contact there. Because, yeah, that's something we recommend, of course, to our customers as well to engage inside a company, but also outside a company that can be just one opportunity. And there of course, you also gain a lot of insights and a lot of valuable links to learning journeys, blog posts, and other information around the SAP portfolio, around DevOps there as well. And yeah, apart from that, I mean, of course, we already mentioned the openSAP course, we also applied some kind of DevOps approach when we came up with the course, actually. So, yeah, we also have an internal community of experts I mentioned before. And from that point of view, when we came up with the idea to come up with the course, we had a lot of experts already at hand. Right. And the good thing is that all were very open and very keen to support us. And from that point of view, we really have now achieved the course with a lot of contributors. I assume almost 20 that really actively contributed to the cause overall. And that's, of course, one opportunity we also saw it now with covid-19, to be honest. I mean, that's really one positive aspect, I would see. It would have been very hard to bring all of those experts inside the recording studio, but yeah due to covid-19, we had to consider home recording here. And that just made it easy to really have all of the experts contributing as a speaker then in the end. And so you will really see the actual experts from different roles, across different areas inside SAP that really can contribute a lot of different angles, they can bring in different aspects and bring in their individual expertise then to a complete, whole offering in the end. And the very rewarding part of the course, I would say, is that we really can also hear the different aspects right. Where we have discussions of general aspects around DevOps in general in the first week. Then, we can focus on yeah CI/CD, especially for ABAP on-premise development, where we have our Git-enabled change and transport system as basis that also allows to benefit from automated delivery pipelines, also for rather the traditional ABAP on-premise development. Then, we are covering the different offerings around SAP Business Technology Platform. And in the fourth week, we also stressed the hybrid aspects where we say, OK, how you can bring in existing processes and extend those also to cover then DevOps relevant cloud process, for example. And in the final week, we are also covering monitoring aspects or really covering the complete lifecycle also in the course. And from my point of view, I hope that at least that's what we try to achieve, is

that learners will really get a complete picture at the end of the course and have then a perfect basis to take then the next steps.

Elisabeth Riemann: And what an amazing achievement, so just to say, 20 experts you said from different locations, that's truly global, cross-functional. There are no silos with this course.

Boris Zarske: Yeah, we really came to a cross-functional team as well. I mean, not all of them really did act as speakers in the end, but they all contributed in one way or the other. And as I mentioned before, really across different roles. So, from the field, from development, from product management. So, yeah, it's really some kind of community here as well. And that should end up in a really cool course in the end. That's what I hope it will be.

Elisabeth Riemann: And what I really personally love is all this emphasis on the team and the community, right, so it's in every single aspect. So, in the truest sense of the word as well, so we have the openSAP course and then we have the SAP Community, the learning journeys, and we'll include all these info's in the show notes for everyone.

Boris Zarske: I assume that learners then afterwards also want to gain some hands-on experience and for that, of course, many of our services are part of the trial environment, for example, of SAP Business Technology Platform, and we also plan to be part of the upcoming free tier model then of the SAP Business Technology Platform, which allows also to come up with yeah small production use cases that you can run and then scale as single services by changing that to a paid model as needed. So that also fits very well to our approach to start slow and simple and then expand as you go. And we also have missions in SAP Discovery Center that are also linked from the SAP Community topic page and yeah that's just several approaches. I also wanted to mention that one other aspect, if you want to make first steps, for example, we also allow a non-disruptive approach. So, when I now think of CI/CD for ABAP on-premise, as already mentioned is Git-enabled change and transport system. So, that is part of the SAP S/4HANA system. And there's nothing like a main switch or something where you just switch over now to this new approach. No, you can use it non-disruptively in parallel to your known approaches. You can pick out first proof of concepts and teams that are

eager to learn around that approach and they can really try it out in parallel, non-disruptively. And then you just learn and adapt and expand as you go.

Elisabeth Riemann: I think that's so perfect because there's no switch to just say, okay, we're transitioning now and then you go from one world to another. So, that's a really good, good aspect, you have there covered. And to conclude today's episode, please, can I ask you to list, if possible, three key takeaways for DevOps with SAP, what should remember? Dirk, can you maybe summarize the main aspects for as.

Dirk Lehmann: Start little, you know, build your own lighthouse, see what works for you, understand that there is no the DevOps thing, there is no canonical definition. So, everyone needs to find their way of doing their jobs. You know, there's guiding principles, I would say, stick to them, follow that approach, and see what works for you. Don't copy what you have seen or read anywhere else. Just see this as an inspiration. This is the sharing idea of the DevOps community inside and outside SAP. Like sharing experiences, what did work, what didn't. Make use of that, and then also engage with, be active in that community, share your learning, and share your news. I mean, we are always looking for customers who will also report back to us what worked for them, what didn't, what is missing, where are the bits and pieces where we may be lacking in our offerings. So, yeah, don't copy, start little, do your DevOps, and don't believe anyone who says it's not possible.

Elisabeth Riemann: Yes.

Boris Zarske: That's really one key learning. I would also stress as well that really death is a rewarding approach also in SAP environments, be it for cloud-centric, for hybrid, and for on-premise. So, it's really worth looking at that and yeah, making first steps in that direction.

Elisabeth Riemann: Excellent. Thank you so much. Thank you, Boris, thank you, Dirk, for being truly wonderful guests and for sharing your expertise and your enthusiasm for DevOps with us all. Thank you so much.

Dirk Lehmann: Thank you for having us.

Boris Zarske: Thanks a lot for having us. It's been a pleasure.

Elisabeth Riemann: Thanks for listening to openSAP Invites. If you've enjoyed this episode, please share, rate, and leave a review. And be sure to check out openSAP's free lending portfolio of Massive Open Online Courses, microlearnings, and podcasts on openSAP.com. And don't miss your next invite, subscribe now.

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