

Cyber Security Business - Episode 4: "The Next Generation of Security Professionals" with Binit Shrestha, Security Software Engineer, HubSpot and Chris McLellan, CSO, HubSpot

Kevin Pouche: Welcome to Cyber Security Business. I'm your host, Kevin Pouche, the COO of K logix. In our podcast, we interview CISOs and other security leaders to hear their advice on the business of information security. This podcast gives our listeners actionable takeaways to help them increase the effectiveness of their security program. Today we are joined by two HubSpot security professionals. First is Binit Shrestha, a newly graduated Security Software Engineer, along with the seasoned security executive Chris McLellan, the CSO of HubSpot. In this segment, we will be discussing the next generation of security professionals from both Binit and Chris's unique perspectives. Welcome guys, and thanks for joining us. Let's kick this off by asking both of you the same question. Chris we'll put you in the hot seat first. Thinking back to how you entered the world of information security, what made you go down that career path?

Chris McLellan: I think where I bumped into it is my natural interest in just technology to start. I was at Fidelity Investments for almost a quarter of a century, managed the E-commerce operations and then their enterprise operations. Part of that is a lot of exception management. Architecting and putting the right controls in place, it evolved into becoming the sizzle for the company and really focusing on, okay, how do we put complimentary controls in order to protect customers, protect our employees, and protect the business. That evolution was enticing, right? It becomes one of those things where, how do you solve the puzzle, how do you build the park, the best mouse trap? How do you make sure you have the right people in power, the right controls, and use technology to do smart things based on people building them the right way.

KP: Binit, how about you? Talk about your initial interest in information security.

Binit Shrestha: I started programming when I was in high school and I was just making simple websites, HTML, CSS, just simple. I was coding iRobot Roombas for competitions and I really thought the computer science field was kind of just a utopia. It's like nothing can go wrong. It wasn't until Sophomore Year of college I took this class, the unofficial name was Defense of the Dark Arts, but it was the introduction to computer security, shout out to professor Ming Chow who was one of my favorite professors. What he showed me in this class, every day he would just find a vulnerability that was well known and he would just show us at the beginning of class. Like first thing he showed us was the Hillary Clinton presidential campaign site and how someone just was able to inject some cross-site scripting and they have a pop-up window that can say anything they want. And to me that was eye opening. Just seeing something that I thought was untouchable. Like Hillary Clinton's presidential website, just being completely owned by a random guy and, I always knew I wanted to do computer science, but I didn't know what, front end, back end. But once I was introduced to security and once I joined HubSpot and the security team there, I knew this was it. I'm never bored. I'm learning something literally every single day. And if I can't learn it, then I have plenty of help. I'm just never bored. And that's one of the things that have drawn me to security and I will hopefully stay for a long time because of that.

KP: Right. I can feel your passion. Chris, talk about some of the characteristics that you look for when you look at new security talent joining your organization?

CM: Well, I think a great illustration is the passion that Binit just talked about. It's the people that have a good personality. They're honest, they want to come in and work hard, but as well they want to learn.

They want to grow and help others solve for what we call EV, which is the environment, not individuals. We want people that are open to come in to learn on the fly. They want to be challenged, that are looking for opportunities to collaborate with others. We want a diverse set of individuals that could come in with different experiences, different backgrounds, and apply them in our world. Everyone that comes into our world, they're both a mentor and they're learning at the same time, everyone brings different qualities, definitely skill sets, and we want to leverage those. So the goal is to find individuals that can come in and add to the environment. Not conform to it, but add to it, expand it and allow us to take the business to the next level.

KP: So you're a strong advocate of mentorship.

CM: Absolutely. Absolutely.

KP: When you think back to the interview process when you were first interviewing at HubSpot, passion clearly sticks out. What other qualities that Chris mentioned do you think stood out for you in the interview process here?

BS: Thinking back to that interview, I was in the room with Chris. I just remember Chris sat me down, had this whiteboard and just started writing all these different words on the whiteboard. And I didn't know a single one of those words. And then he was just like, so do you know any of this? And I said, no, but could you explain to me how this is relevant to security? And the whole interview wasn't just asking me what I do, but he was actually explaining to me how the security team actually worked, what tools we use, what our procedures are. And after that interview I said, wow, I learned a lot, but Chris definitely thinks that I know nothing. I guess this was maybe a test to know how curious I was, to see if I'm actually interested, if I can just say yes to anything or if I'm willing to be vulnerable enough to admit that I don't know something. Thinking back at it, it was a pretty remarkable interview.

KP: I think that's part of the culture, Chris it sounds like you're created with the mantra of not being bored.

CM: No, everyone's learning. To Binit's credit, he brings a ton to the table. And the fact that he could come in and listen and learn and adapt has always been that learning curve. We hired this guy, he hadn't graduated and was still well into college and we said, we want you. And we went after him and we acquired him. And it's been one of the best moves we made. If you're not a smart guy like myself, you surround yourself by really smart people, good people that care, and that works.

KP: So along those lines, we work in an industry where there's I think 1.5 million open jobs. It's an underemployed industry. Attracting people like Binit, is that part of your strategy? Attract a lot of junior people as interns from college? Like how do you attract people when it's this competitive and then how do you retain them once they're here?

CM: we are quite aggressive in the way we recruit. But what we're actually finding is that a lot of students coming out of high school, are very interested in information security. And it's something where they're interested in technology, they want to learn more about it. And that's evolved into really an opportunity for us to start very early in courting and entertaining and having us open doors and allow people to come in. It's okay if you don't like what we do per se, but that's a win just there because

you're trying to find your career. You're trying to map out where you're going in the future and everything you could take off the list gives you a little more clarity. Ideally in many times when we do that, we're actually introducing as something that they find they really like and even have a passion for.

So we find is yes, we do a lot of interning, a substantial amount and most of those interns turn into full time jobs, which is really a credit to them because they come in. It's a fairly complex environment, but we do it in such a way that they bring a lot to the table at the same time, not just into the cyber side, not just into the engineering side, into the compliance side, but across the board. They get a flow across the different teams and work with other departments and it's an environment where we think people feel comfortable. We attract people to come in and feel comfortable. You're not punching a card, you're not worried about your lunch, you're not worried about this or that. You come in and do your work based on your schedule, you have flexibility. And we do a lot of collaboration and I think that's the biggest part. People say, what do you like about HubSpot? And someone will say, well the facility's nice or they have this, the food's great, whatever. It's really about the people. We hire great people that collaborate together and that's what our mantra and it worked well.

KP: So what do you think from your perspective as a security practitioner, I understand that you had an internship which gave you visibility into how the company operates, but still you had many opportunities coming out of that internship to work for many different companies. I understand HubSpot as a company with value, but outside that, why stay at HubSpot?

BS: Chris really nailed the head on that one with the team that we have. I've interned at some companies before where I felt like they didn't even treat me as someone who could contribute to the company as a whole. Like I was doing work that was just their backlog. But the first thing Chris said to me was, hey, this is the future. What you're doing is going to help our company and the security team tenfold. And not just that, but the people that he's hired. I don't feel like I'm working with coworkers. I feel like I'm working with friends or even mentors, the managers I have, they are always asking me, hey, do you understand this? Are you stuck on anything? Is there any way we can help you? I took two weeks off for training just because I couldn't understand some of this language. Stuff like that makes coming into work that much more enjoyable. And I told Chris when I was interviewing at other places after my internship that if you give me an offer, I'm going to turn down everything else because I know that my home is here and I'm willing to just drop everything if you sign me. Sure enough, two weeks after that, he put me in a room and shook my hand and gave me that offer and I accepted it right there.

KP: That's great. You're really building a brand and a culture for the security team here. If you think about really all of the organizations that you've worked for, and I'm sure there was different challenges at all of them, but I think lack of talent had to stick out as a challenge among all those organizations. Do you think that the market will continue in this direction or do you think a market shift will occur in more people will start entering the world of information security?

CM: I actually think we're seeing it already. I think there's a lot of uptick. We haven't really run into a problem where we're not finding the people we need. We are aggressively recruiting as a company and we have 50 full time recruiters on all the time searching and acquiring people to come on and help us be successful. But in the information security space, I think there's good talent out there that is waiting to come on board and be nurtured. And you know, we start with girls taking code and we start in high school and before high school and we bring them in and let them see our facility and try coding as young children. And that fosters this interest. And I think I see a lot of that and I think it's going to continue. And I think the technological advances that are happening in the world these days are going to force us

in that direction. But quite honestly, I think there's a natural interest for it. I think security is one of those spaces where you're going to see, I wouldn't say an abundance of talent, but I do think you'll have the right talent there with the right skills. And more importantly, you'll have the right people that want to learn those skills and continue to evolve. The best people we hire aren't the people that are coming in with the expertise, skill sets and they have what they need. It's the ones that want to grow, evolve and learn over time. And I think there is a lot of good people out there that we can continue to acquire, bring on, fit into our culture. We have a very, very focused and open culture and we want to make sure we leverage that. Our culture team does an unbelievable job helping us build and sustain that culture as we grow to the size we are and beyond, we want to continue to make sure it's an environment where you feel like you can come in and belong. You know what I mean?

KP: So Binit, I know we joked around about you taking Chris' job, but in all seriousness, what are some of your career goals? Do you want to be a CISO or a CSO at some point?

BS: That's a tough question because if you asked me the same question 10 years ago, I would've said I want to be a doctor. If you asked me five years ago, I would have told you, oh, I might want to do some quantum physics. But now looking at what security is, looking at the early curve of where we are in security, it's just going to keep going higher. So I'm just in it for the long run I feel like, but I want to definitely do what Chris did in his past and do something in the entrepreneurial field where I actually want to hopefully go to business school. Hopefully I have a chance to start my own company. And then maybe, like how Chris had landed the CSO job, if the stars align, maybe I will become a CISO.

KP: So whether you start your own company in information security or become a leader for an organization such as Chris in the CSO role, he's done both, what I've heard from a lot of these kind of new and next generation security leaders is that it's going to be more about orchestration and consolidation, is the theme I continue to hear. Would either one of you agree with that statement?

BS: I would say that's everything we strive for; every meeting Chris brings this up. This is like, I would say our ideal goal for what we want in the security team. Okay.

CM: The goal in this strategy is always, we want to make sure we build the environment in such a way where we can manage it effectively and protect our customers and take care of our employees. That includes every aspect. So you think of security, I think of physical, logical, infrastructure, application, right? How do we make sure that we have the right controls in place 7 by 24 in every country we are, that protects and puts the right recipe in place. The way we do that is not necessarily through using people to do response or give them the tools so they can respond. It's building the automation, the technology, having bots in place that can respond and interact with employees and/or customers, having them be able to take action, dramatic or less and be able to manage the life cycle so that everything's being performed and orchestrated. In other words, use smart people to build smart things so the smart people aren't doing repeatable things. And I think that's part of that consolidation, you need correlation engines in there to take a massive amount of data and make decisions. Based on those rules, you put technologies in place to follow through and live the life cycle and then you close out things and attack vectors are always going to change. Bad actors are going to continue to evolve. Zero Day attacks are going to happen on an ongoing basis. So how do you adapt to that? And it's using technology, using smart people and building to scale. To me that's a wonderful race. That's something to have passion about and enjoy. And when you have someone like Binit and other people on the team that you work and collaborate with, I don't come up with the great ideas, they do. I just facilitate the conversations and then we build and I think that's part of our overall strategy.

KP: So thinking about mentorship, we touched on that a little while ago. What advice would you give to an aspiring security leader that does want to be a CISO?

CM: My advice would be first be careful what you wish for. Secondly, I would say it's a great career path in that you're always learning. And I think that's the key for everyone. The environments that we have now will greatly evolve, the challenges and the opportunities will greatly evolve. And having that kind of environment where you're always adapting and you're always learning and you have to be nimble and yet make good decisions, report to the board what you need to, manage with senior management what you need to, and make sure your team is around you and you're all rowing together. That's a great atmosphere to be able to create. I'm learning from my team and from others how to do that in a good way. And you continue to learn. So any job that you go into, you can take your job description, read it over and then you tear it up. That's the baseline, right? Where do you want to be? You want to raise the bar. So how do we do that collaboratively? How do we do that as a team? How do we do that as a company and really make sure the customers are number one, make sure we're focused on execution, making sure we're delivering what we need to for feature functionality and yet making sure that that's being delivered in a way that they feel wholesome and know that they can trust us. Earning the trust of our customers is one of our number one imperative things, sustaining the trust is the number one imperative thing. The same with our employees, right? We hire and we recruit and we bring on great people like Binit, we want to retain them, right? We want to make sure we have an environment where they can grow and foster and that's part of it. So for me, from anyone who's coming in and wanting to be a CISO I'd say come after it, absolutely come after it, but make sure you do it step wise and learn all the way along because it's really the journey, rather than when you get there, that makes it worthwhile.

KP: So last question along those lines and Binit you said something earlier about potentially going back and getting a business degree, one quality that we hear when you think about the future of the CISO role is that it's more of a business focused MBA type role. Do you both agree with that in terms of what that role is going to be in the future?

CM: I think having the business background and business understanding is critical. I think that making sure that you can blend that with technology and the security aspect is going to be critical to the future. Experience is another one of those things that I think adds so much in, but I think how you acquire that over time is more important that you acquire it rather than how you acquire it. But I think having that business background is all important.

BS: I would say it's equally as important also to technology. Like if you know the technology, if you were just strictly business and you didn't know anything about technology, Chris was a good example of the balance. He knows the business impact of what we're doing, but at the same time he's able to give us new ideas. He's able to say, like have you checked this out? Have you tried using machine learning instead of using hardcoded thresholds? Like just that knowledge will really exponentially help us out more than just if you were strictly business.

KP: Well it looks like we've hit our time limit. I want to thank you both very much for joining us. I think we're at a really exciting time in the information security life cycle with a lot of these roles evolving as we discussed to become more business focused, especially with this new generation of security professionals like Binit entering the job market and clearly making a big impact with mentorship from people like yourself, Chris. Thank you both.

BS and CM: Thank you.