Connor: Can you please tell me about your IT work? What exactly do you do?

Milan: That's not an easy question [sighs]. My official role is Network Engineer and Architect. Uh, my rank is director. My functional role is Team Lead of Rapid Development. My actual work is developing automation solutions, um, with a view of automating as much of network operations as possible.

Connor: Can you please tell me about the industry you work in?

Milan: I work in finance.

Connor: What other kind of work do you have to do?

Milan: Well, being in finance, risk is a massive part of the work. So every solution in IT that we deliver has to comply with generic IT rules, which we call ICAPS, and then there’s minimum enterprise requirements that we have to meet and document and defend, if asked. Then there’s WCIT security requirements that we have to do, which is a lot of classification of data, a lot of… like every log message needs to be classified by priority, that kind of stuff. Then I’m a Team Lead, so I have a lot of people management stuff I have to do. You know, from basic things like tracking vacations and whatnot to performance reviews and um… complaint management and tracking and handling… all of that kind of stuff. So it is a holistic role. It’s not like a contractor where you come in and you’re just doing the one thing that you were hired to do. Um, I actually have a full role within the organization.

Connor: Who are all the different people you interact with at your work? Can you tell me about them?

Milan: Well I work on the infrastructure side of things, which means that customers are mostly IT people, because people outside of IT have no clue that we even exist. And that’s kind of the point of pride, right? They don’t know we exist, it means we’re doing our job well. Uh, the only time when people are interested in plumbing with networks is when it fails. Um, so most of my work involves dealing with platforms people… so for us that’s Wintel, um, Linux, and generic UNIX, so we have HBox, we have IBN varieties, we have a bunch of different UNIX, we have Sun, um… and then we have user teams that are dealing mostly with either virtual or hard clients… um, mostly involving things like, uh, cashing of multimedia contents, server distributions, address or locations, management of profiles, that sort of things. Uh, and then we have the management team, because they tend to get confused and think of automation as reporting, so they get super excited when they get on excel or a chart, not realizing that that’s reporting, that’s not automation, but obviously it’s, um, a good way to earn a bonus and to be seen as effective. So we tend to allocate about 20 percent of our time to work that’s outside our primary mission of automation, and we tend to stray more into reporting and visualization, because management team has to appreciate that more because it’s easier for them to comprehend it. And it just means that overall, we are given both the rewards and the visibility that helps us do the other 80 percent of our work.

Connor: And I presume there are no interactions with clients and investors?

Milan: That’s correct, there’s no clients, there’s no investors.

Connor: What aspects of your work do you spend the most time on?

Milan: All of them.

Connor: Can you tell me about that?

Milan: Sure. Writing code [sighs]. Um, anything, from let’s say a simple job of operating a certain type of network device. Let’s say a switch. Our common switch that we have deployed in our environment, we have about 75-plus-thousand of them in the environment. If you take, let’s say two hours to operate each, you’re looking at 150 thousand hours to perform the upgrades. First, it’s prohibitive from the perspective of resources. Second, it’s prohibitive from the perspective of getting the change windows; because it’s a bank, we can only do outages during weekends, and even during weekends there’s only prescribed times. And then there’s weekends where you’re not allowed to make changes because of business activities that are spilling over into weekends. So, 150 thousand hours is basically a nonexistent window to do something manually. So, the only way to really do it is to automate it. To automate it, you have to basically account for every possibly operation you’d do manually through an automated piece of code. A tool that does that does not exist, so it has to be written completely from scratch. So you need to design it, you need to make it flexible so that it can be extended with minimal effort and updated with emerging requirements, and then you have to sit down and you have to write every line of code. That needs to be done because this is a network-specific function; you cannot hire your developer to do that work, because to explain to a developer what needs to happen would require more resource time than actually writing it by a network professional. The problem with that is we simply don’t have enough network professionals who know how to write code or who are available to tutor developers. So, a simple task like that, you’re looking at probably two weeks of 60-hour days—or sixty-hour weeks. So let’s say 120 hours to deliver something like that, not counting testing, validation, production sign-offs, the process-related stuff that then follows the development. But it’s 120 hours of development, um, so, yeah, you really need to focus and you really need to get it done right the first time, because you simply… because of the lack of resources that are available to do this type of work, you cannot keep coming back and doing the same thing over and over, so it has to be done right. And second is, if you impact 75 thousand devices in production, you will not have a job. So, it’s a very stressful and very pedantic work.

Connor: Would you say that is also the most challenging aspect of your work?

Milan: No. Process is the most challenging aspect of the work.

Connor: Why is that?

Milan: Uh, every part of it has to be documented according to, um, SDLC process—SDLC stands for Software Development Life Cycle—which applies to every product that’s introduced within our organization. You have to document every component in a code, every library used. Uh, full documentation has to available… all the code has to be, obviously, fully tested through automated means. Uh, so CACD has to be implemented. Uh, you need to then present that code in its finished iteration to UAT team. That’s usually the team that’s going to end up using it in production environment, with a test environment where they can validate that everything works correctly, and you have to supervise the validation. Then, you have to take it, um, to a production sign-off process that we call PTO, which is four separate meetings, where the solution has to be presented in varying levels of detail to receive approvals from architecture team, from engineering team, from operations, and from risk. So, once you’ve done your work, which you’re paid to do, nobody can use it, unless you follow this other system. Uh, and remember you still have to perform all the risk evaluations, minimal enterprise requirements, all that stuff still needs to be done. That’s much more challenging because the internal comment has to be that we develop solution *despite* policies, not because of them.

Connor: And one final question. Can you share an example of the work you do that best captures the essence of the IT industry?

Milan: Yeah, so, it really is what your primary function is. Plus, as any other maturing industry, IT has finally started to catch up with the amount of support work, documentation work, and justification work that needs to be performed. Because there’s a large number of external entities now that performs audits and provides recommendations to your employer. See, in the past, the person that they hired was the expert, and the company relied on their internal expert to provide systems that will meet the business needs. Well, that’s gone, alright? What they do now is they hire companies to perform audits, and as the result of the audit that company performed, it will issue recommendations. And those recommendations generally don’t evolve to technical aspects of work, because that’s the stuff you know how to do; that’s kind of digging a hole of the IT industry, right? You take a shovel and you dig a hole within your land, which is the work that you’re trained to do and qualified to do and experienced doing. What they recommend is how to protect the business from substandard work, how to protect the business from shortcuts, how to protect the business from malicious behavior. And all of those things add layers and layers of additional work that’s not directly related to the work that you’re doing, yet has become an integral part of participating in enterprise IT. And because all of those are corporation-and-industry-specific, it’s very hard to get trained on it, and we’re finding that a lot of new people that we hire are actually shocked with the amount of work and justification they need to do, even before starting any of the qualified work [air quotes]. So, yeah, I would like to say that presentation, written and verbal skills, attention to detail, ability to be flexible involving environment, is probably 30 to 40 percent of IT work in a modern organization. And 60 percent remains the technical aspects of work that you’re qualified and looking to do. So yeah, kind of evolution of IT in twenty-first century.

Connor: Alright, well I know you have a meeting soon.

Milan: That’s right, I have to go.

Connor: Thank you for your time.

Milan: My pleasure.