



In 2011, Brendan Ittelson graduated from NPS with a certificate in identity management, a learning experience that aligned perfectly with his position at the Defense Manpower Data Center (DMDC) as a program analyst. Shortly after graduating from NPS, Brendan transitioned into the private sector to work for fintech startup Dynamics. A few years later, he accepted the position as global head of support at Zoom. And most recently in April 2020 — shortly after the impact of the coronavirus pandemic hit the U.S. and the need for video conferencing skyrocketed — Brendan became chief technology officer of Zoom. He spoke with us about his recent experiences at Zoom, his time at NPS and the future of online education.

How did you end up at NPS?

I was working for the Defense Manpower Data Center (DMDC) on a number of their identity programs — the CAC card program, RAPIDS system, also the Defense Biometric Identification System (DBIDS). I was very interested in the identity space and when NPS announced their program I was lucky enough to apply and get accepted.

How would you describe your NPS experience?

The conversations and the deep dives into information ... I still go back to it today because they are that poignant. It was so valuable to work cross-sector with people who worked in similar places but came from different perspectives to expand our thinking in a common topic area. That helped elevate the experience.

How have you translated what you learned at NPS into your post-NPS career?

The focus of my studies at NPS was around identity and security and ever since then that has been where my career has focused, so that knowledge has been instrumental. At DMDC, I helped develop an identity management system that is now deployed globally. The knowledge and framework I gained at NPS was helpful in terms of knowing how to drive that program forward.

After DMDC, I worked for a payments company that was looking at electronic credit cards. The security of a credit card manufacturing, production and banking system is critical — all of those threat models I had learned about fit right into my work. Part of what we were looking at in the credit card space was how to define identity and different models of that.

Throughout my time at Zoom, my focus has always been on the architecture and security of the platform. In the video conferencing space, your identity online is such a key part. Especially now with where we are going directionally with the product, that knowledge comes back to me so I can talk about the next level of identity cryptography. I'm harkening back to those days at NPS.

What is intriguing to you right now in the field of identity management?

Especially with where our world is at right now, we need a new version of identity. How you prove you are who you say you are online and in operating in business — we are still trying to figure that out. The federal government made some big leaps in that space, especially with privileged identity management (PIM), but that hasn't hit the global scale.

How you're able to prove your identity to be able to continue to conduct business in this new normal becomes so critical. Think about the number of transactions that folks normally do in person that could be moved into a different setting if we had a stronger identity solution. A lot of companies are starting to work on that on their own. It's a place where there is a lot of possibility in the near future to really revolutionize how we present ourselves online and maintain identity while also looking at security and privacy.

You recently became CTO of Zoom in April. What was it like stepping into that role during such an unprecedented time in the world and such an important and dynamic time at Zoom?

To say the least, things are busy. The company has a very humble culture and a focus on execution and doing what we can to deliver happiness in the world. As we started to ramp up as the need for video conferencing became greater in the world, it was all hands on deck. This is the time when folks need our technology the most, so we're focusing on how we can help. That was the mode of operation then. As things continued to ramp up, I was very fortunate the organization saw the skillset that I had and that it aligned best with the CTO role.

Was it a daunting task to start in that role and forge the path forward?

Yes and no. I say that because within Zoom, I had already been doing a lot in the technology and architecture space. This role just allowed me to focus more on it. I am very humbled by the title.

Before you became CTO, what was one of your biggest accomplishments in your role as global head of support at Zoom?

Helping the organization scale. Watching it grow in that time and growing the team, standing up new offices and influencing the direction to ensure we had a product that could grow. We could grow quickly because of a lot of thought process ahead of time. We wanted to keep it simple so that we could execute and stay mission-focused.

It sounds like you were two steps ahead of scaling Zoom before it was absolutely necessary to scale.

We went from 10 million daily participants in December 2019 to 200 million in March and reached 300 million in April. At that scale you can't acquire new hardware fast enough or hire people fast enough. We had to be thoughtful in the execution and having forethought in the design helped.

What have been the most difficult challenges to work through?

Scaling the platform, and there's also a big focus on the security of our platform. So being able to focus in on both of those areas simultaneously and make sure that we continued to execute required a lot of diligence and focus. We wanted to address concerns about that part of the product head on and have that dialogue and ensure we are continuing to raise the bar as an organization and a service. At the end of the day, we want to make collaboration frictionless and collaboration is what we need so much right now in the world.

Zoom has faced significant criticism over security issues. Your team has done a lot to improve the product's security in a short amount of time. What was that experience like?

In those situations, you learn how strong of a team you have around you. That's what I love about the organization. When a challenge presents itself, we have a whole army there ready to take it on and move things forward. I like to refer to us as passionate engineers. We are always diving down to the root cause of everything. When we start talking about security, we ask, 'How do we address the root cause and neutralize that?' I think about the concern folks had about how we were handling data on our platform. We didn't just address that issue, we empowered our customers. We said, 'Let's give them complete control and let them choose what part of our global network they leverage for their meetings.' We aim for complete transparency in how our product operates.

Most educational institutions, including NPS, are currently relying on online education to some degree. How do you see online education evolving?

There is a very interesting paradigm shift in education right now because it's disrupting the model and opening the door to new ways of teaching and collaboration among students. It will be fascinating to find the groups that are able to adapt quickly and really harness that model of learning. That model has removed the barrier of location. Folks from different backgrounds and mindsets around the globe can now communicate on the same topic, bring their perspectives and have a global dialogue that is not constrained by the resources that are in their area. That is really opening for academic dialogue and without the space constraint it opens up different models for learning which are really interesting when you think about time and space not being important anymore. Folks can have access at whatever time works for them with some of the top resources even if those resources are not in their immediate vicinity. I'm excited about where education can go from here and what doors are being opened. I can't wait to bring more features to the Zoom platform to further spur creativity for more.

