

AWS Summit 2022: How cloud computing has revolutionised the startup ecosystem

Amazon Web Services recently held their first in-person summit since the beginning of the pandemic. Maddyness journalist Jamie Walker went along to hear how cloud computing has revolutionised the startup space.

“If you look at many of the world’s top startup companies that went on to define their category – Netflix, Stripe, Reddit, and so on – they were all built on AWS.”

Kellen O’Connor, AWS managing director of startup business, EMEA, has good reason to be proud of AWS’ history, with its cloud computing software used as the infrastructure that upholds and supports many household name brands.

Amazon Web Services held their first in-person summit since the beginning of the pandemic on the 27th April. Across multiple floors of the ExCeL Centre in London, over 12,000 cloud computing enthusiasts gathered to listen, speak, and marvel at the innovative technologies offered to AWS customers.

The possibilities offered by cloud computing are revolutionising the way in which startups can deliver and scale their products, providing a safer and securer means of launching new products without the need for excessive capital investment in physical servers and IT technicians.

At the summit, I had the opportunity to speak to a range of companies that run all or part of their operations on AWS' cloud computing software, including 10x Banking, Axial3D, and Cazoo, about what AWS offers to them and their customers.

The AWS Summit 2022

Featuring keynote speakers, a multi-floored expo hall, and breakout sessions hosting talks on subjects as diverse as processing data streams in real time, modernising financial services on AWS, and unlocking the potential of IoT data, the AWS Summit 2022 brought the cloud computing community together, in person.

The expo hall offered a wide range of enthusiastic cloud-based companies advertising their services, including cloud-based security programmes and workflow solutions.

One of the most popular sections of the hall was the StartUp Loft, a place for founders and teams to hear from startup experts, with a rotating panel discussing fintech 3.0, building an innovative minimal viable product using artificial intelligence and machine learning on AWS, and 2022 fundraising trends and tips.

Further along the hall was the AWS DeepRacer racetrack, featuring autonomous 1/18th scale race cars. The [AWS DeepRacer League](#) has recently opened for its fourth season, allowing international developers to design and race bots powered by machine learning.

I also spoke to [Stop The Traffik](#), a charity working to abolish human trafficking. Rebekah Lisgarten, director of operations for the charity, spoke of the benefits of hosting their [app](#) on AWS, including the security provided to individuals anonymously reporting instances of trafficking, and the ability to cross reference and analyse datasets on human trafficking and modern slavery activity.

But what do the companies that run on AWS software have to say about cloud computing?

10x Banking: “It has a great reputation in the banking sector”

[10x Banking](#) has a simple aim: to make banking 10 times better for the

banking customer. It was founded by Anthony Jenkins, former CEO of Barclays, who wanted to create the technology that he wanted, but did not have access to, whilst at the bank.

10x Banking offer a cloud-native banking platform to some of the biggest financial institutions in the world. For example, Chase Bank, who launched their UK offering this year, is built on top of 10x Banking software.

Olly Richards, client success lead for 10x Banking, gave a sound overview of the benefits of running a company on Amazon Web Services.

“There are five things,” Olly says. “First, cloud technology reduces total cost of ownership substantially. It means a bank has to spend far less on IT software and maintenance. The second thing is speed to market. The ability to get a product out, tested, see if it works and resonates, and if not, cancel it, is paradigms faster when you’re using cloud technology.

“Third is security and ability to respond to security threats. Cloud providers can pivot to respond to security threats. The fourth is scalability. You can offer across many geographies and regions, and reach far more people, because of the cloud. And fifth is reliability. Cloud is a much more reliable software.”

Axial3D: “The best cloud platform in the world for the vast majority of use cases”

Axial3D take 2D images from an x-ray, CT scan, or an MRI, and turn them into 3D models to be analysed by surgeons prior to a procedure.

The technology has been incredibly effective. In 50% of cases, surgeons will change their plan for surgery after viewing the Axial3D printed model. On average, the surgery takes 62 fewer minutes, and the patient gets out of bed 18% faster.

In a time when NHS waiting lists are getting longer, the population is getting older, and our healthcare services remain underfunded, innovative technology such as that produced by Axial3D can deliver important cost savings.

I spoke to Roger Johnston, CEO of Axial3D, about how the company is aided by AWS’ cloud computing software.

“The core of our invention is based on machine learning, using the Amazon SageMaker,” Roger says. “That platform has given us the ability, the AI, the compute, and all the infrastructure we need. We haven’t had to build any of that. As a startup, we didn’t need to spend the first half a million on servers or security software, we could just focus on our invention.

“We have a very simple mandate,” Roger continues. “We want to democratise the use of 3D in healthcare. So anyone on the planet can take a 2D medical image and turn it into 3D.

“I think Amazon have the best cloud platform in the world for the vast majority of use cases.”

Cazoo: “We want to treat compute as a commoditised resource, something like electricity.”

Cazoo is a case study in how to launch and grow a startup. The automobile ecommerce giant was founded by Alex Chesterman in 2018, and already has over 4000 employees, operations in five countries, and has sold 60,000 retail units. It is also the fastest British company to reach unicorn status, receiving a valuation in excess of \$1B within six months of launching.

During his keynote speech, Cazoo’s engineering coach, Bob Gregory, spoke about how this growth was facilitated by AWS software, a fact which recently led the company to build their entire IT infrastructure on Amazon’s cloud network.

Speaking to Bob later in the day, he explained how being ‘serverless’ has allowed Cazoo to scale at such an impressive speed.

“‘Serverless’ is a controversial definition,” Bob says. “Because it’s really a spectrum. We’re talking about outsourcing operational expertise. With serverless, we mean that we want to treat compute as a commoditised resource, something like electricity. You don’t want to run your own power plant, you don’t even want to have a timeshare in a power plant, you want to flick a switch and the lights go on. You don’t care how it’s delivered, you just want the service.

“Serverless is about that commoditised service, rather than caring about the nitty gritty details that underlie that infrastructure. We give Amazon our code, they run it for us, and they then bill us for the amount of time that it was running. And that’s it.

“We don’t need to worry about that infrastructure or the things we used to have to care about. Instead, we can dedicate that time and cognitive load to solving actual business problems.”

Kellen O’Connor: “We are trying to democratise access to the world’s best technology to build innovative companies”

“With AWS and the cloud, we are trying to democratise access to the world’s best technology to build innovative companies,” says Kellen O’Connor, managing director of AWS’ startups, EMEA. “We do that in a way that is secure, resilient, and that scales. Where customers can manage their costs more effectively. And this has been revolutionary.”

Having spoken to the startups and companies using AWS services, it is fitting to speak to an AWS insider. Kellen has been with Amazon for over 12 years, starting as an intern in their Seattle office. He now runs AWS’ Startup Business team, covering Europe, the Middle East and Africa. His day to day entails meeting with customers, understanding their challenges and problems, and then enabling their team of builders.

But one of the most exciting things Kellen gets to work on is the [AWS Startup Loft Accelerator](#).

“It’s a virtual accelerator, so teams from anywhere in Europe, the UK, and Israel are eligible to apply, and it’s non-equity. We built it based on what customers told us, which is that they wanted to be able to mix and match the content, as opposed to having a forced programme. They wanted to build at their own pace. I think that’s one of the things that makes it a little different from a traditional accelerator programme.”

But for Kellen, the energy that Amazon puts into supporting startups serves a broader purpose:

“We really believe that the more companies that are created, the more innovation there’s going to be in society and that has societal benefit.”

AWS is evolving

A central takeaway from the AWS Summit 2022 is that Amazon Web Services is evolving. In 2021 alone, 3084 major services and features were added to its capabilities. Whilst global infrastructure expansion is planned in Zurich, Israel, UAE, Hyderabad, Spain, Melbourne, Auckland, and Canada West.

AWS has also committed £1.8B of investment into the UK over the next two years *“to help strengthen the UK’s digital architecture,”* helping the next generation of UK cloud-based startups to innovate faster and scale quicker.

From media and entertainment, to manufacturing and industry, to retail and e-commerce, AWS is reinventing how industries operate. Whichever way you look at it, the future is now, and it is cloud-based.

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