Deutsche Bank Technology Conference

Company Participants

- Karl Keirstead, Analyst
- Mike Schutz, General Manager, Cloud Platform Product Marketing

Other Participants

- Unidentified Participant, Analyst, Unknown

Presentation

Karl Keirstead {BIO 1542979 <GO>}

Okay, everybody, why don't we start. We are very happy to have a hot cloud company in Seattle join us for this slot. I've been instructed to read the safe harbor Statement before we start. So before we begin, Microsoft may make some forward-looking statements during this presentation and you should refer to their SEC filings for the risk factors relating to their business. And that's true whether you're here in person or listening in on the web. So check.

Mike Schutz is kind enough to have flown down to join us for this DB event. Mike, maybe you could talk a little bit about your role but, in terms of title, General Manager of Cloud Platform Marketing, which you know is part of Microsoft's broader cloud and enterprise unit. But maybe it's worth starting with a little more of a description than that so everything is in context.

Mike Schutz {BIO 5995559 <GO>}

Absolutely. Thank you for having me, Karl. And hi, everybody.

So again, my name is Mike Schutz. I'm the General Manager of Cloud Platform Product Marketing. My responsibilities include our cloud platform capabilities. That would include private cloud capabilities like Windows Server, System Center; the public cloud with Microsoft Azure of which I expect to talk a lot about today. Then our enterprise mobility capabilities would also fall within that umbrella of the Microsoft cloud platform. So a few of the products within our new cloud and enterprise division. And so really pleased to be here today.

Karl Keirstead {BIO 1542979 <GO>}

Got it. So that's an important point just to start off with, that when people think Microsoft cloud they generally think Azure, or maybe broadly defined include Office 365. But the definition you just provided of cloud platform extends well beyond that.

Mike Schutz {BIO 5995559 <GO>}

That's right. So if we start at the top level we think about the Microsoft cloud as the Microsoft commercial cloud. You think about Office 365, Dynamic CRM and Azure and the capabilities within it. So if we double click within the cloud platform capabilities we really want to focus on, there's some 40-odd services within Microsoft Azure. Those roughly fall into categories like Infrastructure-as-a-Service. And from a hybrid cloud perspective, as well as just raw storage and compute. In the cloud platform capabilities, Platform-as-a-Service. So as organizations think about modernizing their applications. ISVs think about building cloud native applications into SaaS apps.

There's a lot of platform capabilities that we offer in Azure. Data platform capabilities. You think about extending the value of applications and really taking advantage of big data analytics, Hadoop, structured and unstructured data, machine learning extending into advanced analytics and into IoT. Then lastly enterprise mobility. And so in the increasingly mobile world how do we help organizations get a handle on the security and manageability of a mobile productive workforce, providing a companion service to Office 365 to help organizations secure the devices, secure applications and ultimately the data. So that's kind of the breadth of the cloud assets.

Then we also think about offering consistent private cloud capabilities so organizations can build private clouds and hybrid clouds using the technologies that were cut from same cloth as the public cloud and put them in their data center.

Karl Keirstead {BIO 1542979 <GO>}

And Mike, when you think about across all of these cloud assets and you think about recent demand trends, what are some of the things that you've picked up on that feel like their inflection point changes in the last -- you pick it, six months; whether it's the kind of workloads that Microsoft's customers have been moving; whether it's verticals that have really inflected in terms of a migration to the cloud? What are some of the demand trends worth calling out to the group here?

Mike Schutz {BIO 5995559 <GO>}

Sure, absolutely. So the first thing, the biggest change that's happened over the last 12 to 18 months has been the conversation has shifted from why cloud to how should I move to the cloud or how should I embrace it. And different verticals have different challenges with respect to regulatory compliance, data sovereignty, geographic distribution, etc. But by and large we're seeing a tremendous appetite for decision makers, NIT decision makers in the line of businesses to look at the cloud, whether it be SaaS apps, whether that be just thinking about modernizing our infrastructure.

Infrastructure-as-a-Service has proven to be the lowest friction way to start in the cloud. So if you think about starting in Dev tests [ph], bringing in applications just to try it out and then bringing those applications back on prem as a starting point.

Thing about those line of business applications in Infrastructure-as-a-Service. And the benefit of Infrastructure-as-a-Service has always been you kind of can take an existing app without modification and run it in the cloud even though it wasn't designed to be in the cloud. And so a lot of customers have taken that step, at least for a part of their application estate. And it's less about moving the app and more about how do I think about extending my data center or extending my IT assets into the cloud.

And so in terms of the demand signals that we're seeing, one, just huge, explosive growth in Infrastructure-as-a-Service. But as organizations get more comfortable with the cloud and they understand the benefits of not just some cost savings but ultimately the agility in which they're able to provide to the organization, to be able to do things faster instead of waiting weeks or months to get a server deployed or an infrastructure or new app deployed, I can do that on demand. Moving into higher-level services like Platform-as-a-Service or getting more analytics capabilities. So we're seeing a lot of increased usage in some of these higher-level services as one example.

Karl Keirstead {BIO 1542979 <GO>}

Got it. And maybe as we dive into these different components of Microsoft's cloud platform-- and you mentioned at the beginning that this is likely, we'll talk Azure in this part if that's all right. That's the hot topic. Obviously Microsoft doesn't disclose Azure revenues. But talked to you on the call gave us some usage metrics which suggests its growing at a pretty good clip. But obviously AWS is a giant and its multiple is larger than Azure, whatever the Azure number is. You've got competitors like Google. You've got IBM with SoftLayer. So it's hyperscale but it's also hypercompetitive. And so I think everyone would love to hear what are the two or three main ways that you're trying to differentiate in the infrastructure space? And in particular, just because AWS is so big, how are you differentiating against AWS?

Mike Schutz {BIO 5995559 <GO>}

Sure, absolutely. And it's a great question. We often have the dialogue with our customers because many customers have tried or used AWS and so it's absolutely a dialogue that we have frequently.

You talked about hyperscale. That fundamentally is one of the ways that we differentiate. There's only a couple or three hyperscale clouds out there in the world, us being one of them. We operate today in about 19 regions, which means we have 19 data center regions globally. We continue to expand as our customers need us to do so. To put it into perspective, that's about twice as many as AWS and about five or six times that of Google Cloud platform. And so even if you combined AWS and Google Cloud, we're in more regions than the two of them combined. And so hyperscale is important. It's important to our customers because they want our service where they are and where their customers are. And so that's one of fundamental tenets. But AWS is big, too.

The other elements. And this is where really the differentiation comes in, is around hybrid. Because of our fundamental strategy to help customers deploy the same technologies that we put in our public cloud hyperscale data center and run those in their data center on top of Hyper-V, on top of our System Center assets, as well as bringing Azure Infrastructure-as-a-Service and Platform-as-a-Service capabilities to run in their data centers, they then have the flexibility to help decide which applications move and when.

We also have a set of capabilities that provide connective tissue between the private cloud and the public cloud, whether or not customers are running our private cloud technologies or not. Examples there, we have a storage product called StorSimple that is a -- think of it like a set-top box for storage in their environment. It's an iSCSI storage device that plugs into an existing environment on premises and it just looks like a storage area network and it seamlessly tiers the storage to the cloud. And so customers can think about their data center as seamlessly extending to ours. And that's a fundamental differentiation to our approach with respect to the other hyperscale cloud vendors, is it's not public cloud or bust. We want to meet customers where they are. And so that's the hybrid element. Very core to our strategy and, frankly, quite important to our customers because they have existing assets that they invest on our premises and how can they extend those and yet still fully embrace the public cloud.

The other element is around our enterprise routes and enterprise-grade support. And so we have some 650,000 partners worldwide. So we have a very broad footprint into our existing customer base with our trusted partners. And we also focus very hard on security and privacy and compliance. We were the first public cloud provider globally to support the ISO 27018 standard which has the highest standards of privacy today. And it's very important to our international customers as well as our customers here in North America. And so the enterprise credibility element of our DNA and helping customers in the enterprise is very core to our strategy.

So those are at a highest level kind of why Microsoft.

Karl Keirstead {BIO 1542979 <GO>}

Yes.

Mike Schutz {BIO 5995559 <GO>}

From a capability perspective we're also differentiated in the level of services that we have relative to the competitors. Infrastructure-as-a-Service, as I said, there's lots of players there. Microsoft and AWS are both leaders from a Gartner Magic Quadrant perspective in Infrastructure-as-a-Service. But AWS is not a leader in the public cloud PaaS platform and Microsoft is. As well as Storage-as-a-Service where Amazon also plays. And so think about the breadth of the Microsoft offering. It helps align with where our customers are looking to move over time as they think about application modernization and not just running VMs in the cloud, as well as our broad footprint and our trust that we have in the enterprise community.

Karl Keirstead {BIO 1542979 <GO>}

Yes. And actually on that question, I know Microsoft hasn't disclosed this so Zack is probably going to shake his head at you when I ask this question. But can you talk a little bit about this differentiation between running VMs in the cloud? Pure compute service storage infrastructure versus the premium services on top? Any metrics you can share? Maybe anecdotes just around what that mix is for Azure and how it's changing?

Mike Schutz {BIO 5995559 <GO>}

Well let me tell you what we're seeing is -- outside of a specific metric. But certainly Infrastructure-as-a-Service is an onramp to the cloud. But Azure App Service, which is a PaaS platform on Azure, is a very fast-growing service for us as are some of our data platform services. And so we see the entry point that customers start will oftentimes be Infrastructure-as-a-Service and then they combine Infrastructure-as-a-Service plus next-gen app platform as part as they go out. And so the move that we see are the addition of premium services we will continue to see growth in.

Karl Keirstead {BIO 1542979 <GO>}

Okay. And if could ask you a question about one of the -- I think I get the opportunity to leverage Microsoft's incredible software portfolio. But that's really a little bit of a double-edge sword, because if you get perceived by potential clients that Azure is a little bit too Microsoft-centric it can be a bad thing because you've got AWS pitching a sort of Swiss neutrality. So how do you get beyond that issue because you don't really have a (inaudible) here in Azure. You don't yet, as far as I know, have full Red Hat Enterprise limited support on Azure. So I think everyone would love Microsoft to open up to more third-party technology as part of Azure. Where are you on that journey?

Mike Schutz {BIO 5995559 <GO>}

It's absolutely been a huge focus and I hope that everybody is seeing the progress that we've made there. In fact, today about 20%, over 20% of the virtual machines in Azure Infrastructure-as-a-Service are running Linux. And so we think about openness very broadly. Our platform used to be the Windows platform and Azure is now the platform that we focus on for any application. And that could be Windows, it could be Linux. And so whether it be at the operating system layer with Windows and Linux, whether it's at the data layer. So you think about we've got Oracle supported on Azure, SAP, IBM DB2. But also Hadoop, Cloudera, DataStax. So a lot of the most popular data layer capabilities, outside of SQL server, of course, which we believe is great. But whatever a customer wants to do at their data layer we want to support that.

At the -- from a mobile device standpoint we have great solutions to help customers build mobile apps and connect those mobile apps to Android, iOS devices, as well as of course Windows devices. From a language perspective we believe .NET is

great. But at the same time, we want to make sure that developers are familiar with and would like to use Java, Node.js, PHP, Ruby. Whatever they like to choose we want to have those be available on Microsoft Azure. And so we've made a lot of progress to support any app, any OS on Microsoft Azure and we'll continue to make announcements as we go on that.

Karl Keirstead {BIO 1542979 <GO>}

And do you think, Mike, there's an opportunity to enhance the relationship, the partnership with Red Hat to provide RHEL support on Azure?

Mike Schutz {BIO 5995559 <GO>}

We continue to make progress and work on that. So we're excited about what the future might bring.

Karl Keirstead {BIO 1542979 <GO>}

Okay, good. You mentioned just a minute ago flipping a little bit to the enterprise mobility side. That's an area that we're hearing from Microsoft more and more. It seems to be one of your more popular, quote, premium services in your cloud platform.

Mike Schutz {BIO 5995559 <GO>}

Yes.

Karl Keirstead {BIO 1542979 <GO>}

Can you talk a little bit about that? It sounds like you're putting up amazing growth but a lot of people in this room are aware that AirWatch has -- owned by VMware and it's doing extremely well. MobileIron is there. Obviously it's a competitive space. Blackberry just bought Good. So how do you differentiate yourself on that front?

Mike Schutz {BIO 5995559 <GO>}

Well from an enterprise mobility perspective you're absolutely correct. We're very pleased with the growth that we've had and customer adoption and customer success with the enterprise mobility suite. If you're not familiar with it, what EMS provides is a combination of a set of categories that, up until this point, has been discreet with point players in each one. So you're hearing about mobile device management and increasingly turning into mobile application management where a discreet set of folks like AirWatch and MobileIron have played. We've got a solution there called Microsoft Intune as part of the mobile -- the enterprise mobility suite.

From an identity management perspective and actor directory and identity and protecting user identities has always been critical to our customers. We provide an online service called Azure Active Directory Premium that helps provide single sign

on and authentication control for all SaaS applications, Office 365, CRM online. But up to 2,500 other SaaS apps like Workday, like Salesforce, like others. And so IT can help control access and maintain the security of their enterprise that are using SaaS apps and so that's a key part of it.

Then the last component of the enterprise mobility suite is called Right Management. And so it's a service that helps encrypt data and encrypt files and that encryption follows the file wherever it may be. Even if it gets saved on a USB drive it can't be accessed by unauthorized users. And so what we've done is we bring that layered approach to security from device, application, data and the user identity itself and wrap that into an easy to deploy, easy to purchase solution.

And so we're -- in our last report we reported 17,000 customers are using EMS today. We continue to see great growth there and so very pleased with that. It's a perfect companion to Office 365. We have very deep integration with the Office 365 mobile apps on iOS as well as on the Microsoft platforms. And so we're really the only solution that has that deep integration with Office 365, which again provides us not only the breadth differentiation. But also the richness of the experience that we can provide for an end user. And in this world of mobility the end user is really the king and the queen. It really is important that the end user have a great experience, as well as IT having the appropriate levels of control.

Karl Keirstead {BIO 1542979 <GO>}

Got it. We're going to take plenty of questions I'm sure about the cloud stuff. But before we open it up I want to ask a few about some other areas that you have responsibility for around the traditional enterprise side. So you I think mentioned the Windows Server System Center and stuff like that. So they all sit in the server product realm and we get those statistics and we are impressed by them.

And the question specifically is that Microsoft has done a bang-up job on the server product side for several years, where you've been posting growth at close to high single digits, low double digits that far exceeded what Oracle and IBM and a lot of your big peers are putting up. I know there's a number of reasons there. Some of it might be share gain. Some of it might be you guys are doing a great job with your maintenance attach rates. Some of it might be pricing licensing changes. But we're always eager to get some color on how you've been able to pull that off. Can you point to a couple of reasons why the server product number has over the last two years been so good?

Mike Schutz {BIO 5995559 <GO>}

Sure. And I'll talk about Windows Server first and I think SQL Server is an important element there as well.

From a Windows Server perspective it continues to be the most popular operating system on the plant. You look at all the analyst reports it's in somewhere between 70% and 80% share in terms of the operating system share.

Karl Keirstead {BIO 1542979 <GO>}

Yes. Paid --.

Mike Schutz {BIO 5995559 <GO>}

Paid operating system.

Karl Keirstead {BIO 1542979 <GO>}

Yes.

Mike Schutz {BIO 5995559 <GO>}

And where we see the continued revenue growth is because we've driven our business model largely around mix shift to the premium SKUs. And in the Windows Server case that really revolves around the movement to virtualization. And so as organizations virtualize more of their applications and more of their servers, the premium mix of Windows Server continues to grow. And so even in a world where the x86 server shipment numbers might be soft, the premium mix as organizations are virtualization more of their infrastructure to squeeze more of the value out of it, we are able to benefit from the increased revenue from that.

Then also, because there's so much data explosion happening you need servers to ration across that data. And so the data explosion not only helps our SQL Server business, which it absolutely does and I'll talk about that. But it also helps drive more server deployments, and that not just in the cloud, it's certainly on premises, too. And so these secular forces of virtualization and data are really helping the server business, particularly on our premium mix.

On the SQL Server front certainly the explosion in data and the consolidation customers are doing with respect to their database workloads is really beneficial to the SQL business; again, driving that premium shift, more cores, more premium mix of SQL Server. And also the share gains with respect to SQL Server becoming. And is, a very mission-critical workload now for organizations. So taking more of those Tier 1 workloads. And if you look at Gartner's Magic Quadrant for relational database systems, this is the first year Microsoft has passed Oracle because of our cloud assets, as well as the SQL Server strength on premises. And so that's really helped fuel that growth in the traditional server business.

Karl Keirstead {BIO 1542979 <GO>}

Okay. And on that Windows Server business, which if I'm not mistaken is the largest component of the whole server product revenue bucket. SQL Server's obviously pretty good as well. When we look at your total server product numbers that you do disclose, I think in the June quarter for Microsoft it decelerated a little bit and I think it's pulled down a little bit the commercial licensing growth number. And there wasn't much of an explanation on the earnings call outside of I think Amy flagged

Windows Server managing to grow despite a relatively weak x86 server market. Could you elaborate on how the broader server product business did for Microsoft in the June quarter and how Windows Server did in particular?

Mike Schutz {BIO 5995559 <GO>}

Well the server number all up I think in constant currency was about 9%, which did outpace the peers on the market.

Karl Keirstead {BIO 1542979 <GO>}

Okay.

Mike Schutz {BIO 5995559 <GO>}

And so a lot of that is again fueled by the innovation that we've delivered in the last wave with Windows Server 2012, as well as some of the announcements we made in the 2016 wave. And so we're pretty excited and the customers are pretty excited about the 2016 wave that's in preview right now. It combines a rock-solid virtualization platform with a lot of the new technologies that were born in Azure in the public cloud and we're going to be able to deliver those on premises. As well as new container technologies -- containers are pretty exciting these days -- new container technologies that will be making it into Windows Server 2016.

Karl Keirstead {BIO 1542979 <GO>}

Okay.

Mike Schutz {BIO 5995559 <GO>}

So a lot of that's fueling that growth.

Questions And Answers

A - Karl Keirstead {BIO 1542979 <GO>}

Okay. I've got a few more but I know the audience probably has a couple for you, Mike. So does anybody have any questions for Mike around Azure or around any part of the Microsoft Server product set? We'll go right to the front here. Oh, we have the mic in the back. Go ahead.

Q - Unidentified Participant

Yes. There's been a fair amount of buzz that given the sort of latency and the sloth with which Microsoft -- or no, Microsoft -- MasterCard and Visa have been securing e-commerce that you guys are having some very interest high-level discussions with banks directly and other players about creating a browser solution that would secure e-commerce in a way that is copacetic with the internet in general. Do you have any -

- and would likely be more operationally sound. Do you have any perspective on that?

A - Mike Schutz {BIO 5995559 <GO>}

We don't have any announcements to make today. In general, whether it be in financial or any other vertical, we're very focused on the security element and helping organizations be more secure in using our cloud. But also providing products to help them secure their own. But no announcements.

Yes.

Q - Unidentified Participant

Yes. Thanks for taking my question. My question was around -- you hinted at it and it's something that Satya has talked about as well. But just the technologies being developed and the solutions being developed in Azure, applying those on premise and how that's potentially enabling share gains. Can you walk through some of those dynamics and why -- is it just faster to go to market? What's driving that improve technology just because it's done in Azure?

A - Mike Schutz {BIO 5995559 <GO>}

So the way to think about it is there's a virtuous cycle between building it in the public cloud, battle testing it in the cloud and then bringing it for our customers to run in their own data centers. A great example here is just Hyper-V, our virtualization platform. We've had Hyper-V for a long time. We've been a leader with VMware in virtualization for the better part of the last decade. But now Azure runs on Hyper-V. So you've got hundreds of thousands of nodes battle testing Hyper-V every day. That feedback goes directly into the Hyper-V product team. They then are able to make the product better and rock solid and then we deliver that to every customer, whether it be an enterprise IT -- enterprise customer, a service provider. And so that -- living the public cloud lifestyle and then helping organizations put that in their own data center is really a differentiator for us.

Other areas where we're doing that is even just simple things like the Azure portal. This is the place where your average IT pro or developer goes up to spin up a VM or app on demand in Azure. We've bought that portal down so that organizations can run that in their data center with what we call the Azure Pack. And so again, as a service provider, I'm a hoster. I don't have to roll my own portal. I can use the one that Microsoft built and I can focus on higher-level, value-add services. Or in the enterprise space, where enterprises are really trying to be service providers to their business units and be more agile, we can help them by delivering cloud computing technologies that were battle tested in the public cloud and do that in their own environment. Then they can still make the decision when they want to go to the public cloud, which applications go. And by the way, once they do that, the mobility, it's there because they've got that consistent platform on premises and off so it provides a lot less friction for them to think about going to the public cloud. So it's that end-to-end vision.

Satya talks about this sometimes in terms of our servers as the edge of our cloud. From a customer perspective, Azure is a seamless extension of their data center and that's that virtuous cycle from a product development perspective. And we started doing that in Windows Server 2012 R2, the one that's in market and it's kind of fueling some of the growth that we see here. But it's even more so in the 2016 wave. And so that virtuous cycle of developing in the cloud and then bringing it to our customers on premises is really hitting its stride now. Thanks.

A - Karl Keirstead {BIO 1542979 <GO>}

Anybody else? Okay, I'll keep going. Mike on the Windows Server side I think you have a legacy version of Windows Server that's going end of life. Is that -- how big a deal is that for Microsoft? I mean I suppose if you're up to date on your maintenance you get that for free. But maybe there's a large constituency that are not, where there's a revenue lift. How would you characterize it as an opportunity for Microsoft?

A - Mike Schutz {BIO 5995559 <GO>}

The version you speak of is Windows Server 2003.

A - Karl Keirstead {BIO 1542979 <GO>}

That's right.

A - Mike Schutz {BIO 5995559 <GO>}

And it actually went out of support July 15th and so we've passed that data. And so -- and as you point out, a little bit different dynamic with XP. A lot of customers had maintenance on the product--.

A - Karl Keirstead {BIO 1542979 <GO>}

Right.

A - Mike Schutz {BIO 5995559 <GO>}

And they hadn't yet deployed the newer version. And so our focus has been to help customers get the newer version. But we're not necessarily focused on the revenue uplift that that might bring.

A - Karl Keirstead {BIO 1542979 <GO>}

Okay. And further on the Windows Server side, when we in this room attend the Red Hat event it's basically a DockerCon event these days. So anything touching the server OS layer seems to be all about containers and all about the Docker ecosystem. And you mentioned earlier that Microsoft is providing Windows Server 2016 support for Docker. Can you elaborate a little bit on that? It just seems to be a very big deal on the server OS space.

A - Mike Schutz {BIO 5995559 <GO>}

Absolutely. In general, from a cloud native and modern app development paradigm standpoint, the concept of micro services and containers are pretty hot these days. And so the public cloud providers and SaaS providers are pretty fluent in that and it's starting to make its way into the broader communities. Docker has really helped popularize it because of some of the things that they've done to make it easy to consume containers and simplify it.

And so going back a little bit, about 18 months ago we announced we have Docker support on the Linux in Azure. And so we've had that support for a while. We've made a couple of announcements since then with Docker where we're integrating the Docker Hub with Microsoft Azure and continuing to deepen that so that organizations who would like to use containers on Linux and do it with Docker we have prepackaged solutions in Azure to do that. As an example we've got an Ubuntu image with the Docker tooling preinstalled that the developer can just spin up and get going very, very quickly. And so that's the traditional Linux containers on Azure with Docker.

We've also, as I mentioned, announced that we'll be bringing containers to Windows Server 2016. And so we announced the Windows Server containers very similar to what the paradigm of a Linux container, a light-weight run time that virtualizes the operating system instead of the whole server so you can get high density and developers can be very productive in developing and rolling out new applications. And so that's in preview now. We've got developers trying it today and that will be part of the 2016 wave.

We're also bringing a first of its kind type of container called the Hyper-V container that brings the best of high-density, light-weight containers that are known today in the industry with the additional isolation benefit that a virtualization context can bring. One of the things that we often hear particularly from enterprises is around the security of containers and making sure that they feel comfortable using it. And so for customers that have untrusted third-party code that they'd like one more layer of security in the container world we've got this Hyper-V container. And for the developer it really doesn't make any difference because it's the same underlying Windows Server container. It's just wrapped with another layer of security in terms of Hyper-V virtualization context.

And so again, continue to work with Docker on this. We're in very deep collaboration. Then also bringing new container technologies that actually don't exist today in the rest of the market in the next Windows Server release. Then letting developers choose. If they want to run Linux containers through our Windows containers they can do it on Microsoft Azure.

A - Karl Keirstead {BIO 1542979 <GO>}

Any last questions for Mike? Mike, I'll end with one question, then. A lot of the discussion around things like the server OS layer and the cloud end up with a conversation about next-gen cloud native applications, open source, etc. So it feels to me like all of the larger firms are moving a little bit more aggressively today to try to stay relevant in a world where the next-gen architecture and infrastructure looks

different. It's very open source, it's very containerized, etc. So at a very high level what are the kind of things Microsoft is doing to stay relevant in that new SaaS that all the next generation of developers are building?

A - Mike Schutz {BIO 5995559 <GO>}

Well part of it is making sure that we're working very openly in the community, whether it be the open source community and working with partners who are innovating in this space so that they can leverage our platform to be able to build those applications using those technologies.

The other is actually just using some of the innovations that we've used containers and micro services in our own cloud for years.

A - Karl Keirstead {BIO 1542979 <GO>}

Right.

A - Mike Schutz {BIO 5995559 <GO>}

Then commercializing those and bringing those to market. And so both our own innovation. But then working very openly in the industry and the ecosystem, like in the open container initiative with the Linux Foundation to help bring a unified container model to market. And so working very much with the open source community, as well as with the development community that we've known for years.

A - Karl Keirstead {BIO 1542979 <GO>}

Got it. Well Microsoft is obviously having a ton of success with the cloud platform so these are fun days for you at Microsoft and good luck continuing to scale this exciting part of the Microsoft story. And thanks for coming to the DB Tech event.

A - Mike Schutz {BIO 5995559 <GO>}

Thank you so much.

A - Karl Keirstead {BIO 1542979 <GO>}

Yes.

A - Mike Schutz {BIO 5995559 <GO>}

Thanks for having us.