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An All-Inclusive Cloud Experience

Microsoft adds features, integrations to make Azure the second-largest cloud provider in the world

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BY JAKUB LEWKOWICZ

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Microsoft Azure has been showing faster growth than any other cloud provider over the last few years, and its vast ecosystem of partnerships and integrations continually make it an appealing platform for existing and prospective customers.

The platform currently stands as the second largest cloud offering in the world with 21% market share, following AWS's 39% as of Q3 2021, according to Statista. It has a faster growth rate than its larger competitor at 59% for Azure and 32% for AWS.

It offers many features in the data and analytics space, ranging from Platform-as-a-Service (PaaS) solutions for data and big data management and analytics, to multiple AI and machine learning offerings, to specialized Software-as-a-Service (SaaS) solutions such as Azure Purview, which is a unified data governance solution that helps users manage and govern their on-premises, multi-cloud, and SaaS data.

However, from a PaaS perspective of the cloud, Microsoft Azure is the leader. "So from a whole cloud point of view, from just moving compute and workloads, Amazon is still the market share leader. But when we look at this from (the standpoint of) developing and running applications, Microsoft is the leader with a little bit more than 25% of market share, followed by AWS at 15%," said Lara Greden, research director for IDC's PaaS practice.

Azure's expansion is a combination of both people who are already customers as well as more small and medium-sized businesses that are poised to become larger, especially those that are poised to utilize Kubernetes and cloud native architectures.

"I think Microsoft Azure really has the kind of leadership to tell people to come here to create the new applications to be a digital-first," Greden said.

The cloud in general has reached an inflection point as 75% of companies already have some combination of rehost, replatform, and refactor into the cloud, said Sambit Ghosh, senior vice president of the Microsoft practice at Datavail. Two-thirds of those are most likely lift-and-shift.

"At this point Azure has definitely been creating and enhancing their cloud-native services in a more accelerated fashion in the last several years," Ghosh said.

Ghosh noticed that many customers are running applications in Oracle and are looking to move that into Azure Cloud.

Now, Azure has opened up support for Linux and open-source technology to meet that need. Azure now offers full support for common Linux distributions, including Red Hat, SUSE, Ubuntu, CentOS, Debian, Oracle Linux and CoreOS. The endorsed Linux distributions are created and published by Linux partners for use in Azure environments.

Platform experience important

In addition to pushing cloud-native, Microsoft Azure offers a plethora of features and integrations to entice people into their platform and to advance the way that people can meet their business goals more efficiently if they're on the platform already.

Part of this comes from meeting developers where they already are, whether they're collaborating on Microsoft Teams — which doubled in usage from April 2020 to 2021 and now has 145 million worldwide users, according to Statista — or by building on the skill sets that many developers already have.

"Microsoft has the leadership ability there, because so many developers have skills in .NET. And then the integrations can be created in .NET with their integration suite. Now, you don't just have to have a central team doing it," IDC's Greden said. "Integrations with legacy systems continue to be the key enabler in today's economy and for the foreseeable future."

Microsoft is helping companies with integrations by dispersing that key scaling capability among all of their developers, rather than having integrations managed by a central integration team.

"They're providing that flexibility to customers to meet them in their journey, which I think is definitely a smart move in driving adoption onto the cloud, rather than switching platforms," Datavail's Ghosh said.

Azure includes features like Azure Cosmos DB, which integrates with Azure services and allows users to choose from multiple database APIs including MongoDB, Cassandra API, and many others.

It also offers plugins for companies that want to run Red Hat or JBoss Enterprise or some other Java apps through the Azure Marketplace. More people can get their hands on integrations because Azure helps citizen developers utilize integrations through its Power Apps, Microsoft's low-code offering.

Microsoft recognized the importance an elastic cost model has in alleviating one of the major concerns of moving the cloud: cost. Power Apps are now available in a pay-as-you go model as of Microsoft's announcement at its Ignite event in November 2021.

"[The pay-as-you-go model] basically allows you to take more risks and create more apps, because you're going to pay the right amount," Greden said. "Let's say you have 1,000 users use it once a month; you're not going to pay the same as somebody who's having 1,000 users using it every day."

Microsoft added many new capabilities to Power Apps such as built-in commenting where users can write and share Office-like comments directly inside the authoring canvases of Power Apps, Power Virtual Agents, and Power Automate.

Data insights can now be used to discover inefficiencies in workflows and business processes with Process Advisor in Microsoft Power Automate.

AI a heavy emphasis

Azure is putting a heavy emphasis on strengthening its low-code capabilities through AI and its ownership of GitHub, according to Greden. "[Azure] is able to take all the data in GitHub and feed that through AI models to be able to do AI pair programming and we're just at the cusp of what that will enable companies to do," Greden said. "This is key to Microsoft's strategy because it enables more people to develop with better quality because quality is still a really big issue when it comes to applications."

All of the main AI capabilities that companies seek out have now been bundled into one kind of offering: Azure Applied AI Service, announced at Microsoft's 2021 Build event. The service includes Azure Cognitive Search, Azure Form Recognizer, and Azure Immersive Reader, in addition to newer offerings like Azure Bot Service, Azure Metrics Advisor, and Azure Video Analyzer. Azure Bot Service makes it easier to build, test, and publish text-, speech-, or telephony-based bots through an integrated development experience. Azure Metrics Advisor, now generally available, automatically detects and diagnoses issues to minimize downtime.

"There are a lot of custom applications out there. We see companies running certain (electronic medical records systems) like hospital systems running more specific custom .NET applications that they have written. A lot of colleges have a lot of custom (learning management systems) applications that are running. Banking also has a lot of customization. So within that, AI has been something that companies are more and more interested in," said Errin O'Connor, founder and chief architect for EPC Group and the author of four Microsoft Press books covering Power BI, SharePoint, Office 365 and Azure.

Embracing data

O'Connor said that the number one request he is seeing from Azure customers is that they want to move their existing on-premises SQL servers to Azure and then create a data warehouse.

"Some of the services they're rolling out around Synapse and Purview are around data governance; that's all driving analytics modernization into Azure," Datavail's Ghosh said.

Azure Synapse Analytics was launched in 2019 as a service that brings together data integration, enterprise data warehousing, and big data analytics. Users can query data on their own terms with either serverless or dedicated options at scale.

The service provides a unified experience to ingest, explore, prepare, transform, manage, and serve data for immediate BI and machine learning needs.

"It's a little strange because you have Power BI and then you have Azure Analytics. But Analytics is more for Big Data," EPC Group's O'Connor said.

This way, users can easily create a holistic, up-to-date map of their data landscape with automated data discovery, sensitive data classification, and end-to-end data lineage and enable data consumers to find valuable, trustworthy data, according to Microsoft in a post.

"We're seeing a drive for modernizing applications being motivated by companies wanting to leverage data more and more to convert the data into information that they can then leverage to make intelligent decisions," Datavail's Ghosh said. "But in order to do that, you need to first start automating some of your processes and taking the data from your business and bringing it into a common data store."

Hybrid cloud models

Azure is expanding its customizability by embracing hybrid cloud models, and the platform offers ways to accomplish hybrid data integration.

"I think Microsoft has done a good job of making that key and central to their strategy. Like they recognize that hybrid cloud will include other clouds and it will include people's own data centers," IDC's Greden said. "I think AWS is probably still a little heavy on the single cloud sort of point of view, but the rise of Kubernetes is definitely lending itself to that multiple cloud or data center type of operation."

For hybrid data integration, Azure includes Azure Data Factory, which enables users to build, manage and run ETL and ELT processes at any scale using code-free interactive user interfaces. This allows for many capabilities to be automated since they are exposed through APIs.

"They're releasing Azure Kubernetes Service and other container instances on top of their hybrid offerings, which allows you to bring your applications into Azure Cloud but you're not locked into Azure Cloud," Datavail's Ghosh said.

Going down the path of a hybrid model and containerization, Microsoft announced the public preview of Azure Container Apps at Ignite 2021. It functions as a managed serverless container service for developers who want to run microservices in containers without managing infrastructure.

The service offers full support for Distributed Application Runtime (Dapr) and scales dynamically based on HTTP traffic or events powered by Kubernetes Event-Driven Autoscaling (KEDA).