

# New Azure advancements remove cloud barriers for enterprises at Ignite 2017

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Microsoft Azure

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Cloud technology has enabled the era of digital transformation for enterprise customers, small businesses, and governments alike. While the vast majority of organizations have moved to a cloud-first technology strategy, most are still early on realizing this strategy due to a number of aspects from technology complexity to evolving regulations. Over the past year, the Microsoft Azure team has explicitly focused on removing all barriers for enterprise customers, so that even the most complex technology and policy requirements are uniquely met with Azure. And, while this opens up new opportunities for enterprise organizations, all customers benefit. Fundamentally, we believe that the success made possible by the cloud must be accessible to every business and every organization – small and large, old and new.

Today, at Microsoft Ignite conference in Orlando, I talked about how cloud is no longer about who has more features, it's about how successful you can be with the cloud. With our depth of enterprise understanding and grit to do the complex technology work, Azure uniquely unlocks cloud-based success for all of our customers. To do this, we have focused our innovation into four key areas that I spoke about: enabling IT and developer productivity, providing a consistent hybrid cloud, unlocking AI solutions, and ensuring trust through security, privacy and cost controls.

## Productive with Cloud

As you move increasingly large and complex applications to the cloud, it requires a comprehensive set of tools to build, deploy, and manage them efficiently. Within management capabilities specifically, Azure's integrated management tools continue to expand end-to-end monitoring, alerting, and now provide central policy management for all VMs created in Azure. Combined with the new PowerShell and Bash support in Azure Cloud Shell, you are armed for efficiency running apps on Azure.

To support these large and complex applications, Azure also continues to expand the infrastructure available to span all types of workloads, from our recent M series VMs for SAP HANA implementations, to the new deep learning NVIDIA GPU-based VMs and high-memory E series of VMs.

Ultimately, your cloud-first strategy also incorporates moving to a DevOps approach. To this end, we built Visual Studio Team Services, a cloud-based DevOps toolset. And, we've tightly integrated Azure and Visual Studio Team Services to provide an end-to-end DevOps experience across build, deploy, and run for your applications. No need to patch together different dev tools like other clouds; with Azure it's all built in, regardless of which OS you're using or language you choose.

## Providing Consistent Hybrid Cloud

Azure has long been committed to enabling the only true consistent cloud experience from identity, to data, to platform, to security and management. We uniquely understand that a distributed hybrid cloud model is the durable cloud model. And, we uniquely understand that hybrid cloud is more than just infrastructure – it must address your entire environment.

Enabling consistent development across cloud and on-premises, Azure Stack integrated systems are now shipping and available for purchase – with Dell EMC, Lenovo, and Hewlett Packard Enterprise (HPE) showcasing their solutions here at Ignite. Now developers can build one application and have it run in Azure and Azure Stack, opening up new uses cases such as edge and disconnected solutions and meeting literally every regulatory requirement.

Frequently, the most important, but also most complex, aspect of any application is the data. And, dealing with data in a hybrid application or full cloud migration situation can be prohibitively expensive. I was recently reviewing a statement of work for an enterprise organization to migrate their 1,000+ SQL Server based applications to AWS. The cost to modify each of these applications, so they could move to AWS, was over \$20 million US. That's unreasonable. We've built a fully managed Azure SQL Database service, now with 100 percent SQL Server compatibility for no code changes via managed instance, and are introducing a new Azure Database Migration Service that enables a near-zero downtime migration. The customer facing a \$20 million migration to AWS can migrate all of their application data to Azure without significantly less time and 70 percent lower cost.

Speaking of data, today we also announced general availability of SQL Server 2017. This is an incredible milestone representing the first version of SQL Server to run on Windows Server, Linux, and Docker. In fact, there have been 2,000,000 pulls of the SQL Server on Linux image on Docker Hub! In addition, SQL Server 2017 enables in-database advanced machine learning with support for scalable Python and R-based analytics. This means you can train

advanced models easily with data inside SQL Server without having to move data. The bottom line is that SQL Server 2017 delivers industry-leading, mission critical performance and security with everything built in, including AI, now on the platform of your choice. These are just some of the reasons that [dV01](#) moved onto SQL Server 2017 on Linux and is experiencing unmatched performance and value.

Additionally, we're also making it increasingly cost effective to run SQL Server and Windows Server on Azure. Taking advantage of Azure Hybrid Benefits, customers can gain up to 50% reduction in licensing costs. Combined with the no-code changes with Azure Database Migration Service, it's clear that Azure is THE most cost-effective cloud to run your Windows Server and SQL Server applications.

While other cloud vendors talk about hybrid as purely infrastructure, or even as simply hosting legacy virtualization infrastructure in public cloud, we know this is not sufficient. Only Microsoft offers the comprehensive, consistent, hybrid cloud to address the real-world needs of enterprise customers today and into the future.

## Unlocking Intelligent Solutions

Data isn't just a core part of apps – it is fundamental to developing breakthrough intelligent apps. Azure has a comprehensive set of both data services and AI services that enables every organization to build experiences powered by AI.

As cloud-based applications increasingly scale, reach global users, and power AI experiences, we have come to a place where you need data at planet scale and performance. This is why we built Azure Cosmos DB, the first globally distributed, multi-model database service delivering turnkey global horizontal scale out with guaranteed millisecond latency and uptime. Today, we extend what Azure Cosmos DB can do, with new integration with Azure Functions, for event-based, serverless systems. This new combination of Azure Cosmos DB and Azure Functions enables developers to use event-driven serverless computing at global scale.

To enable the new generation of AI-powered apps and experiences, Azure has built the entire stack for AI – from infrastructure, to platform services, to AI dev tools. Azure offers the most complete, end-to-end AI capabilities such that AI solutions are possible for any developer and any scenario.

Within our AI services, I'm excited to announce breakthrough new Azure Machine Learning capabilities, including a new Machine Learning Workbench, that dramatically improves AI productivity of any developer and data scientist. These new capabilities provide rapid data wrangling and agile experimentation using familiar and open tools. AI developers and data scientists can now use Azure Machine Learning to develop, experiment and deploy AI models on any type of data, on any scale, in Azure and on-premises.

# Ensuring Trust Through Security, Privacy, and Cost Controls

We've long understood that Azure would only be used if customers trust the technology. This is why we have continued to lead the industry in security and privacy certifications. And, this is why we continue to push the industry forward with new security and privacy innovations including [Azure confidential computing](#) enabling encryption of data while in use, and a new Azure DDoS protection service that monitors the public IP addresses of your resources within Azure, learns an application's normal traffic patterns, and instantly mitigates a DDoS attack when it is detected.

Ensuring customer trust is also why we continue to invest in global infrastructure from the 42 global Azure regions to the new [MAREA undersea cable](#) reaching from Spain to Virginia. To meet even the most rigorous requirements, we just announced that Azure will extend our global regions with [Availability Zones](#). This combination of global regions and Availability Zones provides customers with the most robust infrastructure for application resiliency of any cloud provider. Whether for high availability, redundancy, or site failover, Azure provides the full spectrum of resiliency options, so customers can run even their most mission critical applications with peace of mind.

To put security expertise in the hands of every customer, we're expanding the integrated Azure Security Center capabilities to now also monitor and protect on-premises systems and other clouds, enabling full hybrid cloud security management and threat detection. Powered by Microsoft's Intelligent Security Graph, the Azure Security Center provides both security recommendations and threat detection, with remediation now possible from directly within the Security Center. Combined with new Just in Time (JIT) admin access to resources in Azure, you have an end-to-end, integrated security toolset. With the global and nation-state security threats facing customers today, Azure offers built-in security and intelligence-powered security management tools – all directly in Azure.

A key aspect of trusting the cloud is fully understanding the costs. No one wants a surprise bill. We recently announced the acquisition of Cloudyn, the leader in cloud cost management. Today, I'm thrilled to announce that Cloudyn is now integrated into Azure and the new Azure Cost Management services will be free for all Azure customers.

To further enhance pricing options for customers, we announced today that Azure will begin offering Reserved VM Instances, with price savings of up to 72% cost savings for one- or three-year commitments. With Azure Reserved VM Instances (RI), you have unprecedented flexibility to cancel or refund your RIs at any time. RIs help provide cost predictability and ensure you have the VM capacity you need when you need it. We will continue to expand our Reserve Instances to additional Azure services in the future, as well. And, by combining

Azure RIs with Azure Hybrid Benefits, customers can save up to 82%. Azure is providing incredible cost savings, coupled with unmatched cost management tools to enable transparency and control over your cloud costs at all times.

Today's announcements, and the entire Azure team's work over the past year, focus on ensuring Azure is the cloud that can meet the most rigorous and mission critical requirements of governments and enterprise customers, with the cost efficiency and productivity necessary for every startup and small business. That's because we believe that the success made possible by the cloud must be accessible to every business and every organization.

Azure. [Cloud for all.](#)