Microsoft Connect(); // 2016
// November 16-18

CONNECT(); //2016 – NEWS FACT SHEET

NEWS OVERVIEW

On Wednesday, Nov. 16, 2016, Microsoft Corp. demonstrated its vision of enabling the future of development with solutions that serve any developer, any application and any platform. Below is a summary of the announcements made during the live-streamed customer event in New York City.

Data Shared at Connect(); 2016

- **More than 20 million Visual Studio 2015** installs (with the free Community Edition representing more than 14 million of those)
- **1 million Visual Studio Code monthly active users**
- **4.6 million registered Visual Studio Team Services users**
- **Thousands of developers from hundreds of companies** have contributed to .NET Core and related open source repositories, with nearly two-thirds of the contributions coming from outside Microsoft
- **1 million Visual Studio Dev Essentials members**
- **Half a million more Xamarin users** since the acquisition, a three times increase over the company's previous growth rate
- **20,000 registrations for the SQL Server on Linux private preview**, including over 50 percent of the Fortune 500
- **1.6 million Azure SQL Databases** in the cloud and over 100 billion queries per day
- More than **120,000 new Azure subscriptions** per month
- Approximately **1 out of 3 virtual machines on Azure are Linux**
- 35 percent month-over-month growth of **Microsoft Graph** in past year
- 47,000 active third-party applications built using **Microsoft Graph** and more than 1 billion API transactions on Microsoft Graph over the last month
- More than **400 million Windows 10 devices**
- The Windows 10 Cortana search box now has **141 million monthly active users**

Ecosystem News

- **Microsoft is pleased to become a Linux Foundation Platinum Member** and further partner with the community to deliver transformative mobile-first, cloud-first experiences to more people. Because Microsoft is a member of the Linux Foundation, Microsoft customers will benefit through increased collaboration and innovation by a diverse developer ecosystem.

- **Samsung Electronics Co. Ltd. collaborates with Microsoft to bring .NET to Tizen running on 50 million Samsung devices around the world.** Today Samsung is releasing a preview of Visual Studio Tools for Tizen, which will enable developers to build .NET apps for the Tizen operating system, running on 50 million Samsung TVs, wearables, mobile devices and many other IoT devices around the world. Visual Studio Tools for Tizen provides device emulators, an extension to Visual Studio with full IntelliSense and debugging capabilities, and a UI framework based on Xamarin.Forms, enabling developers to build a common UI for all devices including Windows, iOS and Android. Tizen's .NET support will be officially released and shipping on Samsung devices, including TVs, in 2017 and will use Tizen's app store for distribution. *Learn more about Visual Studio Tools for Tizen at http://www.aka.ms/tizen.*

- **Google joins the .NET Foundation Technical Steering Group.** Today the .NET Foundation welcomes Google to the Technical Steering Group joining Microsoft, Red Hat, JetBrains, Unity Technologies and Samsung to help bring greater innovation to the .NET platform. Google has been one of the most active contributors outside Microsoft to .NET Foundation projects over the past two years and has been helping to drive the ECMA standardization process for C#. Google [recently announced extensive support for .NET developers](#) on Google Cloud Platform and has published .NET client libraries for the majority of Google Cloud Platform services, including deep support for [PowerShell](#) as well as native integration with [Visual Studio](#). All of these efforts are made possible by cross-company commitment to open source. *Learn more at http://dotnetfoundation.org/blog.*

Developer Tools and DevOps

As part of Connect();, Microsoft showed developers how it is taking its Visual Studio product family expertise and extending it to new scenarios that existing Visual Studio developers can target, as well as opening it to new technologies and platforms for any developer. See our summary on the [Visual Studio blog](#).

- **Visual Studio 2017 release candidate.** Microsoft is making available the release candidate (RC) of Visual Studio 2017, marking a major milestone on the path to its general availability (GA) in the first half of 2017. Visual Studio 2017 RC delivers new capabilities to help any developer with any application and any platform be more productive. With Visual Studio 2017 RC developers get both bug fixes and new functionality that were not previously available in past public previews. This release also includes a go-live license, making it ready for use on production projects. *For more information, please see our announcement on the [Visual Studio Team blog](#) and [the Visual Studio 2017 RC page](#).*

- **Visual Studio Team Foundation Server 2017 RTM.** Today, Microsoft is releasing Team Foundation Server (TFS) 2017, the collaboration platform for every developer. Team Foundation Server 2017 is adding Package Management, Code Search, Test & Feedback Extensions, and even more improvements in Release Management. In addition, TFS 2017 customers can browse the Visual Studio Marketplace for extensions and install them in their TFS environment. *For more information, please see our announcement on [Brian Harry's blog](#).*

- **Visual Studio Mobile Center preview.** Microsoft announced a preview of Visual Studio Mobile Center, a mission control for mobile apps that works with iOS and Android apps built in Objective-C, Swift, Java, Xamarin and React Native. Mobile Center brings together the cloud and life-cycle services that developers need to deliver high-quality apps faster. Mobile Center lets developers build, test, distribute and monitor apps and makes it easy for developers to scale apps on demand and add popular mobile features such as identity services and offline sync. To receive your invitation to the preview as soon as possible, please visit the Visual Studio Mobile Center page and sign up now. *For more information, please see our announcement on the [Visual Studio Team blog](#) and the [Mobile Center (Preview) page](#).*

- **Visual Studio for Mac preview.** Today, Microsoft is sharing a preview of Visual Studio for Mac, the latest member of the Visual Studio family. Visual Studio for Mac is a macOS-based IDE focused on building mobile, cloud and macOS apps. The first preview release includes support for building native apps for iOS and Android using C# and F# through Xamarin, as well as back-end through Azure-connected services and support for ASP.NET Core. Upcoming releases will include support for a wider range of languages and back-end services. *For more information, please see our announcement on the [Visual Studio Team blog](#) and the [Visual Studio for Mac (Preview) page](#).*

Today, Microsoft also announced:

- **.NET Core Runtime, Libraries, ASP.NET Core, Entity Framework Core 1.1 released.** Today we announced the release of .NET Core 1.1, which includes several new features along with many bug fixes and general enhancements. *For more information, see the [.NET Team blog](#).*

- **ASP.NET Core posts dramatic TechEmpower benchmark results.** Today, TechEmpower posted its Round 13 results, which show ASP.NET Core MVC as the fastest mainstream fullstack web framework in the Plaintext test. *For more information see https://aka.ms/techempower.*

- **Xamarin for Visual Studio.** Today, Microsoft announced that Xamarin Inspector, the integrated iOS Simulator for Visual Studio, and Xamarin Profiler are now fully supported and generally available to all Visual Studio Enterprise subscribers. In addition, the Workbooks interactive learning tool is now generally available to all Visual Studio users. Xamarin.Forms Previewer is now also available as a preview for Visual Studio developers on Windows, alongside the previously announced preview available on Mac.

- **Xamarin Studio** is now available in 14 languages.

- **Xamarin Test Cloud** now supports the Appium framework. With the addition of Appium to our list of supported frameworks (including C#-based UITest and Ruby-based Calabash), mobile developers will now be able to create automated tests in Java.

- **Azure Application Insights** is now generally available, backed by a 99.9 percent uptime guarantee. Customers can choose between the new Basic (pay per GB) and Enterprise (pay per node) pricing plans. Application Insights is also announcing in new datacenters in Western and Northern Europe. *[See more](#).*

- **Visual Studio Team Services** added multiple new services including GA of Package Management, Code Search, public preview of the TFS Database Import Service for Visual Studio Team Services, Test and Feedback Extensions on Team Services and TFS 2017, GA of Release Management for Team Services, and a public preview of Package Management for npm packages for VSTS. *More information can be found on our [Visual Studio Team Services blog](#).*

- **Visual Studio Tools for Docker.** Docker tooling available on Visual Studio includes multiproject debugging support for single and multicontainer scenarios, publishing to Azure App Service as a container integration with CI/CD to Azure Container Service, and Windows Server Container debugging for .NET Framework apps. We are also updating the Visual Studio Code Tools for Docker.

- **Training opportunity for developers.** Microsoft has added a Day 3 training event on Nov. 18, where [Microsoft Virtual Academy](#) and [Xamarin University](#) experts will live-stream free training on the cutting-edge technologies featured at [Connect(); 2016](#).

Cloud Development

Microsoft made several new announcements that enable developers to more quickly and easily build intelligent cloud and mobile applications with Azure.

- **Azure Functions General Availability.** In March 2016, Azure Functions was announced in Preview. On Nov. 15, after an extremely successful preview, we announced the GA of Azure Functions, a serverless event-based experience to accelerate your development. It can scale based on demand, and you pay only for the resources you consume. The streamlined user experience in the browser, out-of-the-box Azure and third-party service bindings, and integrated continuous deployment capability make it stand apart from the serverless competition. *For more information, please see our announcement [here](#).*

- **Azure Bot Service.** On Nov. 15, we announced the public preview of Azure Bot Service support. This empowers developers to rapidly build bots powered by the Microsoft Bot Framework, deployed and run on the Azure serverless cloud. Developers can use their existing skills and tool chain or the browser portal experience, enabling them to focus on building more intelligent bots, not just how to run and scale them. *For more information, please see our announcement [here](#).*

- **Azure App Service on Linux (Preview).** In September, we [announced](#) the preview of Azure App Service on Linux making it easier for PHP and Node.js developers to run their web applications natively on Linux. Today we are enabling developers to bring their own Docker formatted container images and extending support to ASP.NET core. *For more information, please see our announcement [here](#).*

- **Azure Container Service (ACS) upgrade.** On Nov. 7, Microsoft announced a series of updates to ACS that continues to demonstrate ACS is one of the most streamlined, open and flexible ways to run container applications in the cloud. The updates include Kubernetes support in ACS (in preview), DC/OS upgrade to 1.8.4, open source Azure Container Service Engine, Azure Container Registry (in preview), continuous integration and deployment to Azure Container Service (in preview). *For more information, please see our announcement on the [Azure Container Service blog](#).*

- **Azure N-Series General Availability.** Azure N-Series has been in preview since August 2016. On Nov. 15, Microsoft announced GA of the Azure N-Series virtual machines (VMs). As of Dec. 1, Azure N-Series VMs feature the latest cutting-edge GPUs from NVIDIA. N-Series VMs will be generally available in South Central US, East US, West Europe and South East Asia. *For more information, please see our announcement [here](#).*

Data Platform and Intelligence

- **Public preview of the next version of SQL Server on Linux and Windows.** The next major release of SQL Server, Microsoft's data management and business analytics platform, represents another significant step forward in enabling choice for developers and organizations. SQL Server enables choice of development languages, data types and deployment on-premises and in the cloud. With this release, Microsoft brings the power of SQL Server to Linux and Windows with support for Docker containers. The first public preview of the next version of SQL Server is available starting today. *For more information, please see our announcement on the [SQL Server blog](#) and visit [www.sqlserveronlinux.com](#).*

- **SQL Server 2016 SP1 makes leading innovation available to any developer.** Microsoft is making it easier for developers to benefit from the innovations in SQL Server for more of their applications. SQL Server 2016

SP1 is making key innovations more accessible to customers across editions. Developers and partners can now build to a single application programming surface to create or upgrade new intelligent applications and use the edition that scales to the application's needs. SQL Server Enterprise continues to offer the highest levels of scale, performance and availability for enterprise workloads. *For more information, please see our announcement on the [SQL Server blog](#).*

- **Visual Studio Code extension for SQL Server and updated connectors and tools.** To make it seamless for all developers to develop with SQL Server, Microsoft Visual Studio Code users can also now connect to SQL Server, including SQL Server on Linux, as well as Azure SQL Database and Azure SQL Data Warehouse. Microsoft also released updates to SQL Server Management Studio, SQL Server Data Tools and command line tools, which now support SQL Server on Linux. In addition, Microsoft has released a portfolio of updated tooling and connectors to enable developers to be more productive with SQL Server across Linux, PHP, Java, Python, Ruby and Node.js, including a JDBC Driver that is now 100 percent open source. *For more information, please see our announcement on the [SQL Server blog](#).*

- **Azure Data Lake Analytics and Store GA with Visual Studio and Visual Studio Code Tooling.** Azure Data Lake includes all the capabilities required to make it easy for developers, data scientists and analysts to store and process data at petabyte-size files with massively parallel analytics and enterprise-grade security for insights on data of any size, shape and speed. Today, Microsoft announced the general availability of Data Lake Analytics, a cloud analytics service for developing and running massively parallel data transformation and processing programs in U-SQL, R, Python and .NET over petabytes of data. There is no infrastructure to manage, and data can be processed on demand, enabling scale in seconds, while paying only for the resources used. *Please see our announcement [here](#).*

Today, Microsoft also announced:

- **Microsoft Translator API**, available on the Azure portal today, leveraged the Microsoft Cognitive Toolkit to build and launch new deep neural network-based translation engines for eight of its most popular languages to significantly improve translation quality with these languages: Arabic, Chinese, English, French, German, Japanese, Portuguese and Spanish.

- **Azure DocumentDB** introduces a new emulator into preview for easy offline development, initially available for Windows-based development. Developers can also enjoy support for DocumentDB with .NET Core. *For more information, please visit https://aka.ms/documentdblocal.*

- **R Server for Azure HDInsight General Availability** offers predictive analytics, machine learning and statistical modeling using the largest R-compatible parallel analytics library on top of big data.

- **Kafka for Azure HDInsight Limited Public Preview** is an enterprise-grade, open-source stream-ingestion service for doing real-time analytics.

- **Next version of R Server and R Client pre-announcement.** The next release of R Server and R Client will also be available before the end of calendar year.

Office Development

The Office development platform — spanning Office applications, Office 365 services and Office servers — continues to grow and expand, making it easier for developers to build intelligent applications with whatever hardware and software people use to get things done. Connect(); 2016 marks one year of Microsoft Graph, a growing API set featuring workloads across Microsoft under one consistent REST endpoint with unified authentication and rich SDKs. At Connect(); we're also welcoming new products developers can extend, including Microsoft Teams, which provides chat-based team collaboration. *You can see more around building Intelligent Applications with Office at https://dev.office.com/blogs/building-intelligent-apps-with-office-at-connect-2016.*

- **Microsoft Teams — Developer Story and APIs.** Microsoft Teams was just announced two weeks ago, which includes APIs (bots, connectors) that let developers bring their application to where teams work. We've seen great interest and momentum since that announcement; over 150 partners are building apps and integrations into Microsoft Teams. Developers can get started via https://dev.office.com/microsoft-teams, and view the Connect(); Office Panel session as well as a Connect(); on-demand video on Microsoft Teams. *For more information, please see our announcement on the Office Dev blog.*

- **More developers are building Intelligent Applications with Microsoft Graph.** Microsoft Graph is celebrating its one-year milestone this month. It's seen phenomenal growth and adoption over its first year, including 35 percent month-over-month growth, over 47,000 active third-party applications and over 1 billion API transactions over the last month. Microsoft Graph is on track to become exponentially significant for more and more developers in the future as we add more capabilities from across Microsoft, including SharePoint APIs, Insights, OneNote, Active Directory and more. *You can explore and build with the wide array of APIs from https://graph.microsoft.io.*

Windows Development

Today's Windows is more than the traditional PC experience. It's about creating exciting new experiences that empower and engage the user with natural inputs like voice and pen, it's about breaking down walls between console and PC gaming, and it's about enabling entirely new experiences in virtual and augmented reality. Only Windows can do all this.

At Connect(); we're demonstrating how Windows builds upon open standards to make it easier for developers to empower users to do more:

- **Improving Windows app testability and accessibility.** Windows has added native support of the Appium framework to automate UI testing of Windows applications, whether you're testing an app built for the Universal Windows Platform or the Classic Windows Platform (e.g., Windows Presentation Foundation, Win32, Visual Basic 6.0). And once a Windows app is testable using the Windows Application Driver service, the app is also accessible via standard tools such as screen narrators. *To learn more about the Windows Application Driver service, visit https://github.com/Microsoft/WinAppDriver.*

- **Making Windows software more engaging with the Windows Desktop Bridge.** The Windows Desktop Bridge makes it easy for traditional desktop applications to start taking advantage of Windows 10 capabilities, without their code needing to be modified. Using the Desktop Application Converter, ISVs and PC game studios have started distributing and selling their existing software via the Windows Store. And, once software is converted and in the Windows Store, it's easy to add additional Windows 10 capabilities like Action Center notifications, segmentation-based analytics and notifications, and in-app purchases. *To learn more about the Windows Desktop Bridge, visit https://developer.microsoft.com/en-us/windows/bridges/desktop. To see the initial batch of ISVs that have used the Desktop Bridge, check out the Windows Store Powerful PC Software collection at https://www.microsoft.com/en-us/store/collections/fullsoftwareapplications/pc.*

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