

Microsoft Data and AI News

September 2021

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General Announcements

- [Enabling evidence-based policy for a more resilient society](#)
 - IOM is releasing the first ever synthetic dataset of individual survivors of trafficking. The dataset is the largest collection of primary human trafficking case data ever made available to the public.
 - This data release was made possible by Synthetic Data Showcase, a new open-source tool from Microsoft, developed with IOM as part of Tech Against Trafficking – a coalition of technology companies co-founded by Microsoft in 2018.
 - Synthetic Data Showcase is one of several open-source software tools and infrastructure being developed by the Societal Resilience team within Microsoft Research aimed at empowering non-technical experts to address challenges that accompany crises, from global pandemics and climate change, to corruption, cybercrime, misinformation and human trafficking.
 - Also see: [Real-world evidence and the path from data to impact](#)
- [Introducing new Surface products, built for Windows 11](#)
 - On the threshold of Windows 11, we are revealing the largest update to the Surface portfolio in its history.
- [The passwordless future is here for your Microsoft account](#)
 - You can now completely remove the password from your Microsoft account. Use the Microsoft Authenticator app, Windows Hello, a security key, or a verification code sent to your phone or email to sign in to your favorite apps and services, such as Microsoft Outlook, Microsoft OneDrive, Microsoft Family Safety, and more. This feature will be rolled out over the coming weeks.
- [Celebrating Hispanic and Latinx voices](#)
 - This Hispanic Heritage Month, we celebrate the contributions, legacies, and achievements of the community—and highlight the Hispanic and Latinx voices that bridge a rich and proud history

with a vibrant and dynamic future.

- [Top new features in Microsoft Edge put families first](#)
 - Easy access to online expert reviews and customer ratings for over 5 million products right from the address bar when shopping in Microsoft Edge.
 - Express checkout feature in Microsoft Edge ... speeds up the guest checkout experience.
 - When you search for flights, you will see a notification appear in the address bar. Click on that to see the recommendations for your destination for restaurants, sightseeing and more, saving you time as you plan your trip. This feature is currently available in the U.S. across the top 10 booking sites. Support for additional sites and markets will be coming soon.
 - Tab groups allow you to organize the chaos by clustering tabs together.
 - Microsoft Start is a personalized news feed and collection of informational content, which helps you start with articles you're interested in. There's also a Microsoft Start mobile app that you can download for iOS or Android so you can stay informed on the go!

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Data Platform

- Azure SQL
 - [SQL Server 2016 SP3: Last Service Pack for SQL Server](#)
 - The 3rd and final Service Pack release for SQL Server 2016 is now available
 - This last Service Pack includes new functional fixes and enhancements, such as the ability to create an Availability Group (AG) listener without the load balancer to reduce AG failover latency.
 - And also includes supportability enhancements in parity with enhancements already available for newer versions of SQL Server, such as new XEvents, improved statistics corruption detection, and a more scalable system health session.
 - [Cumulative Update #26 for SQL Server 2017 RTM](#)
 - [Cross database queries between Azure SQL database and Managed instance using external table](#)
 - Using cross queries with external tables can be an option for Azure SQL database to query data from another Azure SQL Managed Instance database.

```
CREATE EXTERNAL DATA SOURCE RemoteReferenceData    -- create the
external data
WITH
( TYPE=RDBMS,
LOCATION='tcp:*****.public.*****.database.windows.net,3342',
DATABASE_NAME='*****',
CREDENTIAL= User1, -- the comma is important to work
);
...
CREATE EXTERNAL TABLE [dbo].[DBtable](
[co11] [nvarchar](max) NULL,
[co12] [nvarchar](max) NULL,
[co13] [nvarchar](max) NULL)
WITH
(
    DATA_SOURCE= RemoteReferenceData
);
```

```
...  
select * from [dbo].[DBtable]
```

- [Open sourcing the .NET 5 C# Language Extension for SQL Server](#)
 - SQL Server 2019 supports the R, Python, and Java Language Extensions. These language extensions provide many benefits to developers. They provide data security, rapid speed for deployment, and ease of integration.
 - We are thrilled to share that we are open sourcing the .NET 5 C# Language Extension for SQL Server on GitHub.
- [Azure SQL - Public preview updates for early September 2021](#)
 - Manage backup storage costs by configuring your differential backup frequency on SQL Database.
- [Azure SQL - General availability updates for early September 2021](#)
 - SQL Managed Instance removes virtual cluster as part of the delete flow for better Infrastructure-as-Code deployments.
- [Azure SQL—General availability updates for mid-September 2021](#)
 - Azure SQL Managed Instance is now available under the Azure Resource in Terraform registry.
- [Azure SQL Database: General availability updates for late September 2021](#)
 - Use SQL Data Sync Private Link to establish a secure connection between the sync service and your hub and member Azure SQL Databases
 - New server roles for Azure SQL Database enable Database management without admin-access
- Azure Database for PostgreSQL
 - [Azure Database for PostgreSQL – Hyperscale \(Citius\) now includes PgBouncer version 1.16](#)
 - PgBouncer is a popular Postgres connection pooling tool
 - [Public preview: Azure Database for PostgreSQL – Flexible Server automated intelligent tuning](#)
 - The intelligent tuning feature provides you a way to automatically improve your database's performance by enrolling in the service to automatically adjust storage parameters based on usage patterns and values. This service will query statistics around your database every 30 minutes and make constant adjustments to optimize performance without any interaction from you
 - [Azure Database for PostgreSQL – Hyperscale \(Citius\) now supports PostgreSQL 11.12 minor version](#)
 - [Azure Database for PostgreSQL - Hyperscale \(Citius\) supports PostgreSQL 11.13, 12.8, and 13.4 minor versions](#)
 - [Azure Database for PostgreSQL – Hyperscale \(Citius\) support for Citius 10.1 is generally available](#)
 - [Azure Database for PostgreSQL – Flexible Server: Terraform support in public preview](#)
 - [Azure Database for PostgreSQL – Flexible Server: Azure Pipelines in public preview](#)
 - Deploy a SQL file or inline script to push changes to one or more databases with Azure Pipelines for Azure Database for PostgreSQL - Flexible Server using Azure CLI tasks.
 - [Azure Resource Health for Azure Database for PostgreSQL – Flexible Server in public preview](#)
- Azure Database for MySQL
 - [Azure Database for MySQL: Azure Pipelines support in public preview](#)
- Azure Cosmos DB
 - [Azure Cosmos DB: Azure Functions extension version 4.0 in public preview](#)

- Use the latest Azure Cosmos DB Azure Functions extension version 4.0 based on the .NET SDK version 3.x, enabling authentication with AAD, built-in change feed processor support, and performance enhancements.

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Analytics, Integration, and Reporting

- [General availability: Azure Data Factory managed virtual network](#)
 - With managed virtual network, you can provision the Azure Integration Runtime as part of a managed Virtual Network and leverage Private Endpoints to securely connect to supported data stores. Data traffic goes through Azure Private Links which provide secured connectivity to the data source. In addition, it prevents data exfiltration to the public internet.
- [Apache Spark 3.1 for Azure Synapse Analytics now generally available](#)
- [Power BI September 2021 Feature Summary](#)
- [Power BI Report Server September 2021 Feature Summary](#)
- [Power BI and Excel: Expanded Feature Availability for Power BI Free License Users \(Coming Soon\)](#)
 - We will be expanding the availability of Power BI and Excel connected features such as PivotTables from Power BI datasets and Organization data types to Power BI free license users.
 - This helps organizations who use Power BI Premium to easily distribute authoritative datasets broadly with their users via Excel.
- [Export Power BI report to file API – Preview Update](#)
 - Export Power BI report to file API (preview) allows you to export Power BI reports to the following file formats: PDF, PPTX (PowerPoint) and PNG, by using a REST call.
 - We expect that this Export Power BI report to file API becomes GA by the end of November 2021.
- [Power BI Embedded Analytics Playground Updates](#)
 - The playground offers a wide range of experiences, from embedding your own report and interacting with our client APIs, to exploring interactive showcases and demos.
 - You can now embed a report in our developer sandbox by using your own embed token.
 - You can now view and interact with the Power BI embedded analytics playground in multiple different languages.

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AI and IoT

- [Windows Server IoT 2022 now generally available](#)
 - Windows Server IoT 2022 is designed to support fixed appliances in large scale compute, connections, or storage workloads where processing on the edge is required for latency, bandwidth, cost, data residency or privacy requirements.
- [Azure Machine Learning public preview announcements – Sep 2021](#)
 - Multiple Private Endpoint for Workspace establishes the private endpoint integration between private link enabled workspaces, which can be used with more complex network architectures, and other Azure services such as Synapse and Data Factory.
 - Multiple private endpoints are often used when you want to keep different environments separate.
- [NEW data science curriculum on GitHub was just released, 20 free lessons](#)

Infrastructure and Management

- [Azure Purview now generally available: Govern your data wherever it resides](#)
 - You can easily create a unified map of your data assets and their relationships with automated data discovery and sensitive data classification, get insight into the location and movement of sensitive data across your hybrid landscape, and empower data consumers to find valuable data through a data catalog.
- [Windows Server 2022 now generally available—delivering innovation in security, hybrid and containers](#)
 - Announcing the general availability of Windows Server 2022
 - Customers can take advantage of multi-layer security with Secured-core server and secured connectivity. It allows IT and SecOps teams to apply comprehensive security broadly in their environment with Secured-core server's advanced protection and preventive defense across hardware, firmware, and virtualization layers.
 - Hybrid capabilities with Azure Arc
 - SMB Compression improves application file transfer by compressing data while in transit over a network
 - Scalability improvements such as support for 48TB of memory and 2,048 logical cores running on 64 physical sockets for those demanding Tier1 applications.
 - We are continuing to work with the Kubernetes community to enable Windows Server 2022 container support and bring the new capabilities to Azure Kubernetes Service (AKS) and AKS on Azure Stack HCI.
 - With Azure Automanage for Windows Server, customers can migrate to Azure easily without any changes to network IP, securely do file transfer to Azure using SMB over QUIC, and implement hotpatch for new Windows Server Azure Virtual Machines.
- [Azure Cost Management and Billing updates – August 2021](#)
 - The download pane has tabs allowing you to either download a file, view your data in Power BI, or automate the download.
 - The **Automate the download** tab allows you to either schedule a recurring export to a storage account or integrate with the UsageDetails API to get raw, unfiltered cost data.
- [Guarantee capacity access with on-demand capacity reservations—now in preview](#)
 - Announcing the preview of on-demand capacity reservations for Azure Virtual Machines
 - This new feature allows you to deploy and manage the compute capacity required to run Azure VMs separately from the VMs
 - Until now, the only way to obtain a service level agreement (SLA) for Azure Virtual Machines capacity has been to deploy actual virtual machines (VM), whether running or stopped.
- [Improve availability with zone-redundant storage for Azure Disk Storage](#)
 - General availability of zone-redundant storage (ZRS) for Azure Disk Storage
 - ZRS enables you to increase availability for your critical workloads by providing the industry's only synchronous replication of block storage across three zones in a region, enabling your disks to tolerate zonal failures which may occur due to natural disasters or hardware issues. ZRS is currently supported for Azure Premium SSDs and Azure Standard SSDs.

Training and Technical Guides

- [Season 2 of Microsoft Envision: Answering big questions facing business leaders](#)
 - Our upcoming season kicks off Tuesday, Oct. 5
 - Microsoft Envision is free to attend. To register and explore on-demand content from prior episodes, visit envision.microsoft.com. We hope to see you there!
- [Join us behind the scenes at Azure, thanks to the Well-Architected Framework](#)
 - Watch on-demand: Join us for Well-Architected: The Backstage Tour, a virtual event where you will get five brief peeks at how we power the features that address each of these pillars of the Azure Well-Architected Framework.
 - The Azure Well-Architected Framework is a set of guiding tenets that can be used to improve the quality of a workload. The framework consists of five pillars of architecture excellence: cost optimization, operational excellence, performance efficiency, reliability, and security. Incorporating these pillars helps produce high-quality, stable, and efficient cloud architecture.
- [Boost your skills by joining Microsoft at PASS Data Community Summit](#)
 - Microsoft will join this year's PASS Data Community Summit conference as the Premier Sponsor
 - Register for the PASS Data Community Summit today
 - Visit the event website to register to attend the free online conference from November 8-12, 2021.
- [Calling on developers for Virtual Hackathon](#)
 - Join our 3 day virtual hackathon to work with other technologists, healthcare workers, and innovators to build meaningful solutions.
- [Empowering resilient communities and accelerating our collective impact with #BuildFor2030](#)
 - Register today for the #BuildFor2030 Hackathon, which seeks to drive transformative solutions and services into development to further the UN Sustainable Development Goals (UN SDGs).

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Development and Tools

- [Community support for Python 3.7 is ending on 27 June 2023](#)
 - Because Python 3.7 extended support on Linux will end on 27 June 2023, any applications hosted on Azure App Service that are still using it will be unsupported after 27 June 2023. Your applications will continue to run unchanged but won't receive any patches after 27 June 2023, since Python will no longer be providing them.
- [Azure SQL Migration extension in Azure Data Studio in public preview](#)
 - The extension also performs assessments on your SQL Server databases to check for Azure suitability and readiness of migrating them to Azure SQL Managed Instance (PaaS) or SQL Server on Azure Virtual Machines (IaaS).
- [SQLIOSim utility now available for Linux](#)
 - We are excited to announce the availability of SQLIOSim utility for Linux ecosystem. SQLIOSim is used to perform stress tests on disk subsystems to simulate SQL Server activity.
- [Enhance your Log Analytics data exploration in Azure Data Studio](#)
 - The Azure Monitor Logs extension in Azure Data Studio is now available in preview.

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Lifecycle Updates

- [Search Product and Services Lifecycle Information](#)

- Microsoft Lifecycle provides consistent and predictable guidelines for support throughout the life of a product, helping customers manage their IT investments and environments while strategically planning for the future.
- [Lifecycle FAQ](#)
- [Products Reaching End of Support for 2021](#)
 - SQL Server 2016 moved to extended support on July 13, 2021. Extended Support includes security updates at no cost, and paid non-security updates and support. Additionally, Microsoft will not accept requests for design changes or new features during the Extended Support phase.
 - The following products and releases, governed by the [Fixed Policy](#) reached end of support on July 13, 2021:
 - Microsoft SQL Server 2008, Extended Security Update Year 2
 - Microsoft SQL Server 2008 R2, Extended Security Update Year 2
 - Microsoft SQL Server Compact 4.0
- [SQL Server Native Client \(SNAC\) is deprecated.](#)
 - OLEDB: [Microsoft OLE DB Driver for SQL Server](#) (msoledbsql - not the older, sqloledb). Note: OLEDB has been [undeprecated](#). To use the new msoledbsql driver in existing applications, you should plan to convert your connection strings from sqlncli or sqloledb, to the newer msoledbsql.
 - For example, convert **-from-** `Provider=SQLNCLI11; Server=SQL01;Database=DB01;Trusted_Connection=yes;` **-to-** `Provider=MSOLEDBSQL; Server=SQL01; Database=DB01;Trusted_Connection=yes;`
 - ODBC: [Download the latest ODBC Driver for SQL Server](#)
- [Support for .NET Framework 4, 4.5 and 4.5.1 ended on January 12, 2016](#)
 - The support change does not affect the support lifecycle policy for older versions prior to .NET Framework 4. Support for .NET Framework 4.5.2, as well as all other .NET versions such as 3.5 SP1, will continue to be supported for the duration of the operating system support lifecycle.
 - Beginning with version 4.5.2 and later, .NET Framework is defined as a component of the Windows operating system (OS). Components receive the same support as their parent products, therefore, .NET Framework 4.5.2 and later follows the lifecycle policy of the underlying Windows OS on which it is installed.

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SQL Server Builds

- Find information about the latest SQL GDRs (security updates). The [Security Update Guide](#) is the authoritative source of information on Microsoft security updates. You can filter by date and product category.
- Find the [latest SQL Server service packs and cumulative updates](#).
 - Note: SQL Server Service Packs are discontinued starting from SQL Server 2017
- Find downloads for SQL service packs, setup updates ("Smart Setup"), security updates, and update rollups in the [Microsoft Update Catalog](#)

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Community Resources

- [Microsoft Tech Community](#). Collaborate, share and learn from experts. View recent [blog articles](#).

- [Provide Feedback to the Product Group](#)
- [Channel 9 Shows](#)
 - [Data Exposed](#)
 - [Learn with Dr. G](#)
- [Microsoft Learn](#). Up your game with a learning path designed to prepare you for industry-recognized Microsoft certifications.

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Newsletter Archives

- [Azure Talking Points: Microsoft Data and AI News](#)
- [SQL Server Updates and Lessons Learned](#)

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