



SQL SERVER UPDATES NEWSLETTER

February 2020

Contents

[RECENT RELEASES AND ANNOUNCEMENTS](#)

[TROUBLESHOOTING AND ISSUE ALERTS](#)

[RECENT BLOG POSTS AND ARTICLES](#)

[RECENT TRAINING AND TECHNICAL GUIDES](#)

[SCRIPT AND TOOL TIPS](#)

[AI](#)

[LIFECYCLE UPDATES](#)

[SQL BUILDS](#)

[COMMUNITY RESOURCES](#)

[RECOMMENDED KB'S TO REVIEW REGULARLY](#)

[PREMIER SERVICES](#)

[RECOMMENDED BLOGS](#)

[RECOMMENDED RSS FEEDS](#)

Recent Releases and Announcements

- Creating a world of good: Microsoft launches the Global Social Entrepreneurship program
 - <https://blogs.microsoft.com/blog/2020/02/21/creating-a-world-of-good-microsoft-launches-the-global-social-entrepreneurship-program/>
- Microsoft named a Leader in Gartner's 2020 Magic Quadrant for Analytics and BI Platforms
 - <https://powerbi.microsoft.com/en-us/blog/microsoft-named-a-leader-in-gartners-2020-magic-quadrant-for-analytics-and-bi-platforms/>
- Cumulative Update #2 for SQL Server 2019 RTM
 - <https://techcommunity.microsoft.com/t5/sql-server/cumulative-update-2-for-sql-server-2019-rtm/ba-p/1173066>
- Cumulative Update #12 for SQL Server 2016 SP2
 - <https://techcommunity.microsoft.com/t5/sql-server/cumulative-update-12-for-sql-server-2016-sp2/ba-p/1194041>
- Security Update for SQL Server 2016 SP2 CU11
 - <https://techcommunity.microsoft.com/t5/sql-server/security-update-for-sql-server-2016-sp2-cu11/ba-p/1167667>
- Security Update for SQL Server 2016 SP2 GDR
 - <https://techcommunity.microsoft.com/t5/sql-server/security-update-for-sql-server-2016-sp2-gdr/ba-p/1167651>
- Security Update for SQL Server 2014 SP3 CU4
 - <https://techcommunity.microsoft.com/t5/sql-server/security-update-for-sql-server-2014-sp3-cu4/ba-p/1167642>
- Security Update for SQL Server 2014 SP3 GDR

- <https://techcommunity.microsoft.com/t5/sql-server/security-update-for-sql-server-2014-sp3-gdr/ba-p/1167633>
- Security Update for SQL Server 2012 SP4
 - <https://techcommunity.microsoft.com/t5/sql-server/security-update-for-sql-server-2012-sp4/ba-p/1167623>
- New Azure SQL Database automatic tuning default settings—March 2020
 - When new Azure SQL Database servers are created, the default settings for automatic tuning will be FORCE LAST GOOD PLAN = enabled, CREATE INDEX = disabled and DROP INDEX = disabled.
 - <https://azure.microsoft.com/en-us/updates/new-azure-sql-database-automatic-tuning-default-settings-march-2020/>
- Data Factory adds schema import, connection tests, and custom sink ordering to data flows
 - <https://azure.microsoft.com/en-us/updates/data-factory-adds-schema-import-connection-tests-and-custom-sink-ordering-to-data-flows/>
- Azure Cosmos DB logical partition size increased to 20 GB
 - <https://azure.microsoft.com/en-us/updates/cosmos-db-partition-size-20gb/>
- On-premises data gateway February 2020 update is now available
 - <https://powerbi.microsoft.com/en-us/blog/on-premises-data-gateway-february-2020-update-is-now-available/>
- Azure Database for PostgreSQL—Planned maintenance notifications now in preview
 - Use this feature to receive alerts about upcoming planned maintenance to your Azure Database for PostgreSQL.
 - <https://azure.microsoft.com/en-us/updates/planned-maintenance-notifications-for-azure-database-for-postgresql-is-now-in-preview/>
- Announcing the preview of Azure Shared Disks for clustered applications
 - With Azure Shared Disks, customers now have the flexibility to migrate clustered environments running on Windows Server, including Windows Server 2008 (which has reached End-of-Support), to Azure.
 - This capability is designed to support SQL Server Failover Cluster Instances (FCI), Scale-out File Servers (SoFS), Remote Desktop Servers (RDS), and SAP ASCS/SCS running on Windows Server.
 - The flow is as follows: (1) The application registers all Virtual Machines registers to the disk. (2) The application instance on Azure VM 1 then takes an exclusive reservation to write to the disk while opening up reads from other Virtual Machines. (3) This reservation is enforced on Azure Disk. (4) All nodes in the cluster can now read from the disk. Only one node writes results back to the disk on behalf of all the nodes in the cluster.
 - <https://azure.microsoft.com/blog/announcing-the-preview-of-azure-shared-disks-for-clustered-applications/>
- Azure Offline Backup with Azure Data Box now in preview
 - With this preview, customers will be able to use Azure Data Box with Azure Backup to seed large initial backups (up to 80 TB per server) offline to an Azure Recovery Services Vault. Subsequent backups will take place over the network.
 - <https://azure.microsoft.com/blog/azure-offline-backup-with-azure-data-box-now-in-preview/>
- Incremental refresh is generally available ... and supported in Power BI Pro
 - <https://powerbi.microsoft.com/en-us/blog/incremental-refresh-is-generally-available/>

- Announcing General Availability of Bring Your Own Key (BYOK) for Power BI Premium
 - With BYOK, each premium capacity can be set to encrypt data at rest using separate keys. As a result, you can exercise control over each capacity separately, revoke your organization's keys and make the data in each separate capacity unreadable to the service within 1 hour.
 - <https://powerbi.microsoft.com/en-us/blog/announcing-general-availability-of-bring-your-own-key-byok-for-power-bi-premium/>
- Announcing: New Power BI tab for Microsoft Teams
 - We're excited to announce the new Power BI tab for Microsoft Teams with support for reports in the new workspace experiences, Power BI apps, and paginated reports.
 - <https://powerbi.microsoft.com/en-us/blog/announcing-new-power-bi-tab-for-microsoft-teams/>
- Azure Cost Management + Billing updates – February 2020
 - New Power BI reports for Azure reservations and Azure Hybrid Benefit
 - <https://azure.microsoft.com/blog/azure-cost-management-billing-updates-february-2020/>
- Hotfix: JDBC Driver 8.2.1 for SQL Server Released
 - <https://techcommunity.microsoft.com/t5/sql-server/hotfix-jdbc-driver-8-2-1-for-sql-server-released/ba-p/1198783>
- Azure HDInsight and Azure Database for PostgreSQL news
 - We're pleased to share a **Microsoft supported distribution of Apache Hadoop and Spark** for our new and existing HDInsight customers. This distribution of Apache Hadoop is 100 percent open source and compatible with the latest version of Hadoop.
 - Users can now provision a new HDInsight cluster based on Apache code that is built and wholly supported by Microsoft.
 - In the coming months, we'll enable the most requested features on HDInsight that lower costs and accelerate time to value. These include an improved provisioning and management experience, reserved instance pricing, low-priority virtual machines, and auto-scale.
 - Given that Microsoft directly supports this distribution, we can quickly provide support and upgrades to our customers and deliver the latest innovation from the Hadoop ecosystem. All of this will enable customers to innovate faster, without being restricted to proprietary technology just to use our support and features.
 - Also, Azure Database for PostgreSQL Hyperscale is generally available
 - <https://azure.microsoft.com/blog/azure-hdinsight-and-azure-database-for-postgresql-news/>
- Announcing preview of Backup Reports
 - Leveraging Azure Monitor Logs and Azure Workbooks, Backup Reports serve as a one-stop destination for tracking usage, auditing of backups and restores, and identifying key trends at different levels of granularity.
 - <https://azure.microsoft.com/blog/announcing-preview-of-backup-reports/>
- Announcing PowerShell 7.0
 - PowerShell 7 is the latest major update to PowerShell, a cross-platform (Windows, Linux, and macOS) automation tool and configuration framework optimized for dealing with structured data (e.g. JSON, CSV, XML, etc.), REST APIs, and object models.
 - We're introducing a number of new features, including: (1) Pipeline parallelization with ForEach-Object -Parallel (2) New operators: Ternary operator: `a ? b : c`, Pipeline chain operators: `||` and `&&` Null coalescing operators: `??` and `??=` (3) A simplified and dynamic error view and Get-Error cmdlet for easier investigation of errors (4) A compatibility layer

that enables users to import modules in an implicit Windows PowerShell session (5) Automatic new version notifications (6) The ability to invoke to invoke DSC resources directly from PowerShell 7 (experimental)

- The shift from PowerShell Core 6.x to 7.0 also marks our move from .NET Core 2.x to 3.1. .NET Core 3.1 brings back a host of .NET Framework APIs (especially on Windows), enabling significantly more backwards compatibility with existing Windows PowerShell modules.
- Wait, what happened to PowerShell “**Core**”? Much like .NET decided to do with .NET 5, we feel that PowerShell 7 marks the completion of our journey to maximize backwards compatibility with Windows PowerShell. To that end, we consider PowerShell 7 and beyond to be the one, true PowerShell going forward. PowerShell 7 will still be noted with the edition “Core” in order to differentiate 6.x/7.x from Windows PowerShell, but in general, you will see it denoted as “PowerShell 7” going forward.
- <https://devblogs.microsoft.com/powershell/announcing-powershell-7-0/>

[Back to Contents](#)

Troubleshooting and Issue Alerts

- **Important:** If the Update Cache folder or some patches are removed from this folder, you can no longer uninstall an update to your SQL Server instance and then revert to an earlier update build.
 - In that situation, Add/Remove Programs entries point to non-existing binaries, and therefore the uninstall process does not work. Therefore, Microsoft strongly encourages you to keep the folder and its contents intact.
 - <https://support.microsoft.com/en-us/kb/3196535>
- Running, Scheduling and Monitoring Elastic Jobs in Azure SQL Database
 - Get-AzSqlElasticJobExecution
 - SELECT * FROM jobs.jobs
 - <https://techcommunity.microsoft.com/t5/azure-sql-database/running-scheduling-and-monitoring-elastic-jobs-in-azure-sql/ba-p/1180179>
- Troubleshooting Common issues with Elastic Jobs in Azure SQL Database
 - Get-AzSqlElasticjobExecution
 - Select * from jobs.job_executions
 - <https://techcommunity.microsoft.com/t5/azure-sql-database/troubleshooting-common-issues-with-elastic-jobs-in-azure-sql/ba-p/1180766>
- Troubleshooting Database Mail issues in Azure SQL Managed Instance
 - <https://techcommunity.microsoft.com/t5/azure-sql-database/troubleshooting-database-mail-issues-in-azure-sql-managed/ba-p/583018>

[Back to Contents](#)

Recent Blog Posts and Articles

- SQL Server Licensing: High Availability and Disaster Recovery benefits
 - Starting November 1st, 2019, every Software Assurance customer of SQL Server will be able to use three enhanced benefits for any SQL Server release that is still supported by Microsoft: (1) Failover servers for high availability (2) Failover servers for disaster recovery (3) Failover servers for disaster recovery in Azure
 - <https://techcommunity.microsoft.com/t5/sql-server/sql-server-licensing-high-availability-and-disaster-recovery/ba-p/1212931>

- Elastic Jobs in Azure SQL Database – What and Why
 - Elastic Jobs is a feature of Azure SQL Database that lets you run a set of T-SQL scripts against a collection of servers or databases, as a one-time job, in an ad-hoc manner, or according to a pre-defined schedule. This feature allows regular maintenance and any action that must be repeated – either across a set of databases or over time, much simpler.
 - <https://techcommunity.microsoft.com/t5/azure-sql-database/elastic-jobs-in-azure-sql-database-what-and-why/ba-p/1177902>

[Back to Contents](#)

Recent Training and Technical Guides

- How can I get started with Azure Private Link | Azure Tips and Tricks
 - <https://www.youtube.com/watch?v=311a6u0eAVw>
- Choosing the right partition key for cost and performance with Azure Cosmos DB
 - <https://www.youtube.com/watch?v=KlXhee6R0rE>
- Lower latency through the right data model with Azure Cosmos DB
 - <https://www.youtube.com/watch?v=FpvacFwoKOI>
- Azure Cosmos DB Free Tier and Autopilot | Azure Friday
 - <https://www.youtube.com/watch?v=FmOA5oufedQ>
- Power BI Desktop February 2020 Feature Summary
 - Incremental refresh is now generally available
 - Hierarchy slicer
 - New DAX functions: FirstNonBlankValue + LastNonBlankValue
 - FHIR connector is now generally available
 - And more
 - <https://powerbi.microsoft.com/en-us/blog/power-bi-desktop-february-2020-feature-summary/>
- SQL Bits 2020 is happening in London: join us March 31 to April 4
 - <https://cloudblogs.microsoft.com/sqlserver/2020/02/19/sql-bits-2020-is-happening-in-london-join-us-march-31-to-april-4/>
- Azure Migration Virtual Event: Best practices for Windows Server and SQL Server
 - <https://cloudblogs.microsoft.com/sqlserver/2020/02/24/azure-migration-virtual-event-best-practices-for-windows-server-and-sql-server/>

[Back to Contents](#)

Script and Tool Tips

- The February 2020 release of Azure Data Studio is now available
 - <https://cloudblogs.microsoft.com/sqlserver/2020/02/13/the-february-2020-release-of-azure-data-studio-is-now-available/>
- A new kind of GridView right in your console: Introducing the early preview of ConsoleGuiTools
 - Introducing the Microsoft.PowerShell.ConsoleGuiTools module now in Preview. Today, it contains one very important cmdlet: Out-ConsoleGridView. This shows up right in the same console window you were using without launching any outside process. This module leverages the incredibly powerful and cross-platform gui.cs library by Miguel de Icaza.
 - If you want to get this right now: Install-Module Microsoft.PowerShell.ConsoleGuiTools

- One of the most powerful features, the -PassThru parameter lets you use the GUI to select data to send further down the pipeline.
- Since the Console GUIs (or CUIs) in Microsoft.PowerShell.ConsoleGuiTools show up in the same console you're prompt is in, support for environments that don't supply a GUI but have a terminal emulators, like Azure Cloud Shell, work out of the box.
- <https://devblogs.microsoft.com/powershell/introducing-consoleguiutils-preview/>
- Visual Studio Code for PowerShell 7
 - We are excited to announce that we have released a major update to the PowerShell extension for Visual Studio Code
 - Includes ISE Compatibility Module, Syntax Highlighting, Multi-Line Editing and Back Search in the Integrated Console, and more.
 - <https://devblogs.microsoft.com/powershell/visual-studio-code-for-powershell-7/>
- Secrets Management Module Vault Extensions
 - A new PowerShell Secrets Management module has been published on PowerShell Gallery. It is currently in a pre-release state and still in active development.
 - The purpose of the Secrets Management module is to provide secure storage and access of secrets in your PowerShell scripts
 - In addition to the built-in local vault, any number of vault extensions can be registered. A vault extension can store secrets on the local machine or remotely. For example, a remote vault extension could use Azure KeyVault to store secrets.
 - <https://devblogs.microsoft.com/powershell/secrets-management-module-vault-extensions/>
- Public Preview of PowerShell Support in Jupyter Notebooks
 - The .NET team shipped an exciting new preview of PowerShell support in .NET Interactive. .NET Interactive (within a Jupyter environment) provides the ability to write .NET Jupyter Notebooks which are a powerful tool that combines documentation and the ability to execute and see the output of code all in the same file.
 - <https://devblogs.microsoft.com/powershell/public-preview-of-powershell-support-in-jupyter-notebooks/>
- Python in Visual Studio Code – February 2020 Release
 - <https://devblogs.microsoft.com/python/python-in-visual-studio-code-february-2020-release/>

[SBack to Contents](#)

AI

- Azure Cognitive Services—New types added to Named Entity Recognition v3
 - <https://azure.microsoft.com/en-us/updates/ner-v3-preview-update1/>
- MLOPS for R with Azure Machine Learning
 - <https://blog.revolutionanalytics.com/2020/02/mlops-for-r-with-azure-machine-learning.html>
- Azure Cognitive Services Computer Vision Read API v3.0 now in preview
 - Read features the newest models for optical character recognition (OCR), allowing you to extract text from printed and handwritten documents.
 - <https://azure.microsoft.com/en-us/updates/computer-vision-v3-preview-6/>

[Back to Contents](#)

Lifecycle Updates

- <http://www.microsoft.com/lifecycle>
- Lifecycle FAQ: <https://support.microsoft.com/en-us/help/17140/lifecycle-faq-general-policy-questions>
- Products Reaching End of Support for 2020 <https://support.microsoft.com/en-us/help/4470235/products-reaching-end-of-support-for-2020>
- Support for Windows Server 2008 R2 and Windows Server 2008 ended on **January 14, 2020**
- Support for SQL Server 2008 and SQL Server 2008 R2 ended on July 9, 2019.
- SQL Server 2014 moved from Mainstream Support to Extended Support on July 9, 2019.
- Support for SQL Server 2016 SP1 ended on July 9, 2019. Please upgrade to the latest service pack.
- Support for SQL Server 2014 SP1 ended on October 10, 2017. Please upgrade to the latest service pack.
- Support for SQL Server 2012 SP3 ended on October 9, 2018. Please upgrade to the latest service pack.
- SNAC lifecycle explained
 - **SNAC 11: SQL 2005 to SQL 2014.** Note that SNAC 11 does not support features released with SQL Server 2014 and SQL Server 2016 that were not available as part of SQL Server 2012, such as Transparent Network IP Resolution, Always Encrypted, Azure AD Authentication, Bulk Copy and Table Value Parameters.
 - **SNAC 13: SQL 2008 to SQL 2016**
 - <https://blogs.msdn.microsoft.com/sqlreleaseservices/snac-lifecycle-explained/>
- Support for .NET Framework 4, 4.5 and 4.5.1 ended on January 12, 2016
 - Please complete the in-place update to .NET Framework 4.5.2
 - 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.
 - https://support.microsoft.com/en-us/gp/framework_faq

[Back to Contents](#)

SQL Builds

- Where to find information about the latest SQL GDRs (security updates)
 - The Security Update Guide is the authoritative source of information on Microsoft security updates.
 - <https://portal.msrc.microsoft.com/en-us/security-guidance>
 - You can filter by date and product category.
- Where to find information about the latest SQL Service Packs and Cumulative Updates
 - <http://support.microsoft.com/kb/957826>
- Where to find downloads for SQL service packs, setup updates ("Smart Setup"), security updates, and update rollups
 - Microsoft Update Catalog <http://catalog.update.microsoft.com/>

- Note: You may have to switch IE to Compatibility View to use the Update Catalog
- SQL version tables and build charts
 - How to determine the version and edition of SQL Server and its components
<https://support.microsoft.com/en-in/kb/321185>
 - Unofficial build chart (NOTE the following site is NOT a Microsoft affiliated website)
<http://sqlserverbuilds.blogspot.com/>

[Back to Contents](#)

Community Resources

- Provide Feedback to the Product Group: <https://feedback.azure.com/forums/908035-sql-server>
- The TechNet Wiki is a library of information about Microsoft technologies written by the community for the community. <http://technet.com/wiki>
- E-Book Gallery for Microsoft Technologies. <http://www.microsoftvirtualacademy.com/ebooks>
- Channel 9 - SQL Jump Start Videos. Channel 9 is a Microsoft community site which features video channels, discussions, screencasts and video interviews.
<https://channel9.msdn.com/Search?term=sql&sortBy=recent&lang=en=true>
- Microsoft Virtual Academy. Free Microsoft training delivered by experts.
<https://mva.microsoft.com/>
- SQL Whitepaper Gallery. Download whitepapers for SQL Server in DOC, PDF, and other formats. All the content is free. <http://social.technet.microsoft.com/wiki/contents/articles/13146.white-paper-gallery-for-sql-server.aspx>
- SQL Server I/O Reliability partners provide storage solutions that have been carefully reviewed to meet the SQL Server storage solution requirements.
http://download.microsoft.com/download/F/1/E/F1ECC20C-85EE-4D73-BABA-F87200E8DBC2/SQL_Server_IO_Reliability_Program_Review_Requirements.pdf
- Microsoft Virtual Labs. Enable you to quickly evaluate and test Microsoft's newest products and technologies through a series of guided, hands-on labs that you can complete in 90 minutes or less. There is no complex setup or installation required, and you can use Microsoft Virtual Labs online immediately, free. <https://www.microsoft.com/handslabs/SelfPacedLabs>
- Microsoft Learn. Up your game with a learning path tailored to today's developer and technology masterminds and designed to prepare you for industry-recognized Microsoft certifications.
<https://docs.microsoft.com/en-us/learn/>

[Back to Contents](#)

Recommended KB's to Review Regularly

- Recommended hotfixes and updates for Windows Server 2012 R2-based failover clusters
 - <https://support.microsoft.com/en-us/kb/2920151>
 - Latest: June 2018
- Recommended updates and configuration options for SQL Server 2012 and later versions with high-performance workloads
 - <https://support.microsoft.com/en-gb/kb/2964518>
 - You no longer need to enable these trace flags in SQL Server 2016 because the auto-detection of the associated logic for trace flags is already incorporated into the product.
- Troubleshooting SQL Server backup and restore operations
 - <https://support.microsoft.com/en-us/kb/224071>

[Back to Contents](#)

Premier Services

- Premier Education as a Service (provides access to the workshop library on-demand portfolio of training courses)
 - <https://services.premier.microsoft.com/education>
- Premier Support Proactive Services (lists available workshops and other proactive services)
 - http://www.microsoft.com/en-us/microsoftservices/support_premier_proactive.aspx
- RAP as a Service (RaaS)
 - <https://services.premier.microsoft.com/assess>

[Back to Contents](#)

Recommended Blogs

- SQL Server Updates and Lessons Learned
 - <https://docs.microsoft.com/en-us/archive/blogs/sqlupdates/>

[Back to Contents](#)

Recommended RSS Feeds

- Most Recent KB's for SQL 2017
 - <https://support.microsoft.com/app/content/api/content/feeds/sap/en-us/cb54dbc0-87de-5eaa-8ca9-f35997ca84eb/rss>
- Most Recent KB's for SQL 2016
 - <https://support.microsoft.com/app/content/api/content/feeds/sap/en-us/d201c5bd-9aab-36d1-0e57-5dadf52a6dad/rss>
- Most Recent KB's for Windows Server 2016
 - <https://support.microsoft.com/app/content/api/content/feeds/sap/en-us/c3a1be8a-50db-47b7-d5eb-259debc3abcc/rss>
- RSS Feed Product Index
 - <https://support.microsoft.com/en-us/help/4089498/support-content-updates>
- To add an RSS feed in Microsoft Outlook:
 - Right click the "RSS Subscriptions" folder-> Choose "Add a New RSS Feed"
 - -or- Choose File->Account Settings->RSS Feeds tab->New...

[RECENT RELEASES AND ANNOUNCEMENTS](#)

[TROUBLESHOOTING AND ISSUE ALERTS](#)

[RECENT BLOG POSTS AND ARTICLES](#)

[RECENT TRAINING AND TECHNICAL GUIDES](#)

[SCRIPT AND TOOL TIPS](#)

[AI](#)

[LIFECYCLE UPDATES](#)

[SQL BUILDS](#)

[COMMUNITY RESOURCES](#)

[RECOMMENDED KB'S TO REVIEW REGULARLY](#)

[PREMIER SERVICES](#)

[RECOMMENDED BLOGS](#)

RECOMMENDED RSS FEEDS