SQL Server version shown as outdated 12.0.2000.8

Last updated by | Vitor Tomaz | Feb 24, 2023 at 3:27 AM PST

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This article applies to both Azure SQL Database and Managed Instance

Issue

The customer is concerned that the SQL Server version for Azure SQL Database and Managed Instance is always showing "12.0.2000.8", although we claim to update it regularly through planned maintenance.

Why is the SQL version always reported as outdated SQL Server 2014?

Investigation / Analysis

You can see the SQL Server version through `@@version` global variable and the `ProductVersion` server property, which is also shown when connecting to SQL Server in SSMS. These are always reporting the value "12.0.2000.8" for SQL DB and MI:

```
SELECT @@version
----------------------------------------------------------------------------------------
Result:
Microsoft SQL Azure (RTM) - 12.0.2000.8   Nov 16 2022 04:43:19   Copyright (C) 2022 Microsoft Corporation

SELECT SERVERPROPERTY('ProductVersion')
------------------------------------
Result:
12.0.2000.8
```

Although it is confusing if you compare it to on-premise SQL Server, the reported version is still correct. It is designed like this mainly for two reasons:

- To preserve backward compatibility with the previous Azure SQL Database version (v11)
- The Azure SQL Database versioning does not follow the same line as the SQL Server on-premise versions. Azure SQL Database has its own version line and we are in v12 now.

It does not mean that it is running SQL Server 2014.

Mitigation

Azure SQL Database and Managed Instance are always running the latest SQL Server engine available. This is documented in [What is Azure SQL Database?](#) ⎘:

> Azure SQL Database is based on the latest stable version of the Microsoft SQL Server database engine. You can use advanced query processing features, such as high-performance in-memory technologies and intelligent query processing. In fact, the newest capabilities of SQL Server are released first to Azure SQL Database, and then to SQL Server itself. You get the newest SQL Server capabilities with no overhead for patching or upgrading, tested across millions of databases.

Regardless of which Azure SQL database version you see reported, you can still be sure that your database always uses the latest SQL Server engine technology. The Azure SQL Database backend nodes are always updated to the latest version of SQL Server, even before it is released to the SQL Server on-premise version.

If you are running Managed Instance, you can confirm the current engine version from the SQL Server errorlog. Managed Instance provides the extended stored procedure `xp_readerrorlog` and it will show you the SQL engine version in the service startup message:

```
-- search errorlog for "Microsoft SQL Server" startup message
exec xp_readerrorlog 0,1, "Microsoft SQL Server";
-----------------------------------------------
Result:
Microsoft SQL Server 2022 (RTM) - 16.0.996.14 (X64)    Nov 16 2022 04:43:19
Copyright (C) 2022 Microsoft Corporation    CloudDB on Windows Server 2019 Datacenter 10.0 <X64> (Build 17763:
```

Azure SQL Database doesn't provide the `xp_readerrorlog` stored procedure, so you can't check for yourself, but it is maintained in the way as MI and receives the same database engine updates.

How good have you found this content?