

SQL Server 2014 is loaded with new features

Microsoft recently announced that [SQL Server 2014 has been released to manufacturing](#) , and that this latest upgrade to Microsoft's popular relational database management system (RDBMS) will be widely available for download on April 1st, 2014.

SQL Server 2014 is loaded with new features, which follows the trend of Microsoft steadily introducing powerful new features with each version of SQL Server over the years. SQL Server 2005 introduced database mirroring, while SQL Server 2008 added policy-based management and transparent full-database encryption. SQL Server 2012 saw the arrival of 'AlwaysOn' availability groups and column store indexes. So what does SQL Server 2014 bring to the table?

As is the case with all of the aforementioned versions of the product, SQL Server 2014 has dozens of new features and improvements. That said, two of the most noteworthy new SQL Server 2014 features are in-memory online transaction processing (OLTP) and improved integration with Windows Azure.

In-memory OLTP

This feature is arguably getting the most attention from SQL Server watchers, as it promises to drastically speed up SQL Server response times for frequently-accessed data, also known in database parlance as "hot data." In-memory OLTP is based on research done by Microsoft Research under the 'Hekaton' project name, and is essentially designed to take advantage of the decreasing price and increasing capacity of RAM now available on modern server hardware. I discuss In-memory OLTP in a bit more detail in a separate post about the [new features in SQL Server 2014](#), but the bottom line is this: If you have database use cases that can take advantage of this new in-memory OLTP engine, you'll see some impressive performance gains.

Azure integration

Microsoft has steadily been improving the integration between their on-premise and off-premise products and services, and SQL Server 2014 takes a big step in that direction.

SQL Server 2014 boasts enhanced integration with Windows Azure cloud services right out of the box, including the ability to back up SQL databases into the cloud. Microsoft is also releasing a free SQL Server to Windows Azure backup tool - slated for release on April 15th, 2014 - that works with SQL Server 2005, 2008, 2012, and 2014 and will allow DBAs to backup (with encryption) SQL Server data into the cloud.

Microsoft has put together a [comprehensive list of SQL Server 2014 features](#) over at MSDN if you'd like to see all the new features, improvements, and fixes in one location. So will you be making the upgrade to SQL Server 2014? Let me know what you think by adding a comment to this blog post.