

Investigación 2: Evaluando los diferentes DBMS Relacionales con alcance empresarial con mayor penetración en el mercado

ORACLE

Plataformas en las que pueden operar

- Sun Solaris 9, 10 (SPARC)
- Solaris 9, 10 (x86)
- 64-bit Sun Solaris 10 (SPARC, x86)
- Red Hat Enterprise Linux 3.0 Actualización 1, 4.0 y 5.x
- Red Hat Enterprise Linux 5.x de 64 bits
- SUSE Linux Enterprise Server 10 (SP1 y SP2 también son compatibles)
- SUSE Linux Enterprise Server 10 de 64 bits (SP1 también es compatible)
- SuSE Linux Enterprise Server 11 de 64 bits
- Ubuntu Linux 8.04, versión Hardy
- Sólo es compatible como plataforma de desarrolladores.
- AIX 5.2, 5.3, 6.1
- Windows 2000 SP4+
- Advanced Server SP4+
- Windows Server 2003, 2008
- Windows XP Pro SP3
- Windows Vista
- Windows 2008
- Windows 7
- Sólo es compatible como plataforma para desarrolladores. En Macintosh OS 10.4, 10.5 (Intel, Power)
- Sólo es compatible como plataforma para desarrolladores. OpenSolaris
- Sólo asistencia de evaluación

Costos:

Product	Named user Plus	Software Update License and support	Processor License	Software Update License and support
Sun GlassFish Server	100 \$	22.00	5000	1,100.00

Ventajas y desventajas:

- Closed-source; free version has very limited feature set
- Temporary tables persist across sessions, and must be removed by the user
- Support for four different character/string types: CHAR, VARCHAR2, NCHAR, NVARCHAR2
- Offers both table and row locking
- Extensive and flexible storage customization with commands like tablespace, synonym, and packages
- Extensive backup mechanisms
- Designed to manage tables and databases on a large-scale basis
- Very expensive

SQL SERVER

Requerimientos:

.NET Framework	<p>SQL Server 2016 RC1 and later require .NET Framework 4.6 for the Database Engine, Master Data Services, or Replication. SQL Server 2016 setup automatically installs .NET Framework. You can also manually install .NET Framework from Microsoft .NET Framework 4.6 (Web Installer) for Windows.</p> <p>For more information, recommendations, and guidance about .NET Framework 4.6 see .NET Framework Deployment Guide for Developers.</p> <p>Windows 8.1, and Windows Server 2012 R2 require KB2919355 before installing .NET Framework 4.6.</p>
Network Software	<p>Supported operating systems for SQL Server have built-in network software. Named and default instances of a stand-alone installation support the following network protocols: Shared memory, Named Pipes, TCP/IP and VIA.</p> <p>Note: Shared memory and VIA are not supported on failover clusters.</p> <p>Also note that the VIA protocol is deprecated. This feature will be removed in a future version of Microsoft SQL Server. Avoid using this feature in new development work, and plan to modify applications that currently use this feature.</p>

	For more information about Network Protocols and Network Libraries, see Network Protocols and Network Libraries .
Hard Disk	SQL Server requires a minimum of 6 GB of available hard-disk space. Disk space requirements will vary with the SQL Server components you install. For more information, see Hard Disk Space Requirements later in this article. For information on supported storage types for data files, see Storage Types for Data Files .
Drive	A DVD drive, as appropriate, is required for installation from disc.
Monitor	SQL Server requires Super-VGA (800x600) or higher resolution monitor.
Internet	Internet functionality requires Internet access (fees may apply).

Operative systems

- Windows Server 2016 Datacenter
- Windows Server 2016 Standard
- Windows Server 2016 Essentials*
- Windows Server 2012 R2 Datacenter
- Windows Server 2012 R2 Standard
- Windows Server 2012 R2 Essentials
- Windows Server 2012 R2 Foundation
- Windows Server 2012 Datacenter
- Windows Server 2012 Standard
- Windows Server 2012 Essentials
- Windows Server 2012 Foundation
- SQL Server Standard Windows Server 2016 Datacenter
- Windows Server 2016 Standard
- Windows Server 2016 Essentials*
- Windows Server 2012 R2 Datacenter
- Windows Server 2012 R2 Standard
- Windows Server 2012 R2 Essentials
- Windows Server 2012 R2 Foundation
- Windows Server 2012 Datacenter
- Windows Server 2012 Standard
- Windows Server 2012 Essentials
- Windows Server 2012 Foundation
- Windows 10 Home

- Windows 10 Professional
- Windows 10 Enterprise
- Windows 10 IoT Enterprise
- Windows 8.1
- Windows 8.1 Pro
- Windows 8.1 Enterprise
- Windows 8
- Windows 8 Pro
- Windows 8 Enterprise

Costs:

SQL Server 2017 editions	Ideal for ...	Licensing model	Channel availability	Open no level price (US\$)
Enterprise	Comprehensive, mission-critical performance for demanding database and business intelligence requirements. Provides the highest service and performance levels for Tier-1 workloads.*	Per core**	Volume licensing, hosting	\$14,256***
Standard	Core data management and business intelligence capabilities for non-critical workloads with minimal IT resources.	Per core**	Volume licensing, hosting	\$3,717***
		Server + CAL ****	Volume licensing, hosting, retail FPP	\$931***
Developer	Full-featured version of SQL Server software that allows developers to cost-effectively build, test, and demonstrate applications based on SQL Server software.	Per user	Free download	Free
Web	Secure, cost effective and highly scalable data platform for public web sites. Available to third party software service providers only.	-	Hosting only	See your hosting partner for pricing

Express	Free entry-level database that's ideal for learning, as well as building desktop and small server data-driven applications of up to 10 GB.	-	Free download	Free
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Ventajas y desventajas

- Closed-source, aimed at corporate/enterprise environments.
- Offers full support for common table expressions
- Requires a deeper understanding of databases/database configuration than other tools
- Can fine-tune security features, such as who can run each stored procedure, who can access data, etc.
- Utilizes an engine that's slightly slower and resource-heavy, but fully ACID compliant.
- Extremely comprehensive reporting system/storage customization
- High degree of control over transactions and procedures
- Community is not terribly active, not as much support online as MySQL.
- Offers more than simple database functionality through a suite of tools: an ETL tool, analytical DBMS, relational DBMS, and reports server.
- Schema changes do not lock tables.
- Relatively high resource footprint

MY SQL

Percentage in market

Top Competitors	Websites	Market Share	Versus Page
MySQL	24,937	19.21%	Microsoft SQL Server vs. MySQL
MongoDB	10,529	8.11%	Microsoft SQL Server vs. MongoDB
PostgreSQL	9,730	7.5%	Microsoft SQL Server vs. PostgreSQL
NoSQL	8,722	6.72%	Microsoft SQL Server vs. NoSQL
Oracle Database	8,213	6.33%	Microsoft SQL Server vs. Oracle Database

BAR CHART FOR MICROSOFT SQL SERVER AND THEIR TOP COMPETITORS IN DATANYZE UNIVERSE

MONOGODB

Ambiente

Amazon Linux 2013.03 and later
Debian 7
Debian 8
RHEL/CentOS 6.2 and later
RHEL/CentOS 7.0 and later
SLES 11
SLES 12
Solaris 11 64-bit
Ubuntu 12.04
Ubuntu 14.04
Ubuntu 16.04
Windows Vista
Windows 7/Server 2008 R2 and later
macOS 10.7 and later

COSTS

250 USD per month

125 USD for support and quality testing

6500 USD annual for core version

10000 USD annual for advanced version

Ventajas y desventajas

- Document Oriented Storage – Data is stored in the form of JSON style documents.
- Index on any attribute
- Replication and high availability
- Auto-sharding
- Rich queries
- Fast in-place updates
- Professional support by MongoDB

Bibliografía:

- <http://www.oracle.com/us/corporate/pricing/technology-price-list-070617.pdf>
- <https://www.libertycenterone.com/blog/postgresql-vs-mysql-vs-sql-server-vs-oracle/>
- <https://www.microsoft.com/en-us/sql-server/sql-server-2017-pricing>
- <https://docs.microsoft.com/en-us/sql/sql-server/install/hardware-and-software-requirements-for-installing-sql-server>
- <https://docs.mongodb.com/manual/installation/#supported-platforms>
- https://www.tutorialspoint.com/mongodb/mongodb_advantages.htm