

Oracle Database

Oracle Database (commonly referred to as **Oracle DBMS** or simply as **Oracle**) is a multi-model^[4] database management system produced and marketed by [Oracle Corporation](#).

It is a database commonly used for running online transaction processing (OLTP), data warehousing (DW) and mixed (OLTP & DW) database workloads. Oracle Database is available by several service providers [on-prem](#), [on-cloud](#), or as hybrid cloud installation. It may be run on [third party servers](#) as well as on Oracle hardware ([Exadata on-prem](#), on [Oracle Cloud](#) or at [Cloud at Customer](#) ^[5])

Contents

History

- [Releases and versions](#)
- [Patch updates and security alerts](#)

Market position



- [Competition](#)

See also

References

External links

Oracle Database

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Developer(s)	Oracle Corporation
Initial release	1979
Stable release	<div>19c^[1]  / 13 February 2019</div>
Written in	Assembly language , C , C++ ^[2]
Type	Multi-model database
License	Proprietary ^[3]
Website	oracle.com/database (https://oracle.com/databases)

History

[Larry Ellison](#) and his two friends and former co-workers, [Bob Miner](#) and [Ed Oates](#), started a consultancy called Software Development Laboratories (SDL) in 1977. SDL developed the original version of the Oracle software. The name *Oracle* comes from the code-name of a [CIA](#)-funded project Ellison had worked on while formerly employed by [Ampex](#).^[6]

Releases and versions

Oracle products follow a custom release-numbering and -naming convention. The "c" in the current release, Oracle Database 21c, stands for "Cloud". Previous releases (e.g. Oracle Database 10g and Oraclegi Database) have used suffixes of "g" and "i" which stand for "Grid" and "Internet" respectively.

Prior to the release of Oracle8i Database, no suffixes featured in Oracle Database naming conventions. Note that there was no v1 of Oracle Database, as co-founder Larry Ellison "knew no one would want to buy version 1".^[7] Oracle's RDBMS release numbering has used the following codes:

Oracle Database Version	Initial Release Version	Initial Release Date	Terminal Patchset Version	Terminal Patchset Date	Marquee Features
Oracle v2	2.3	1979			First commercially available SQL-based RDBMS implementing some basic SQL queries and simple joins ^[8]
Oracle v3	3.1.3	1983			<u>Concurrency control</u> , data distribution, and <u>scalability</u>
Oracle v4	4.1.4.0	1984	4.1.4.4		Multiversion read consistency. First version available for <u>MS-DOS</u> . ^{[9][10]}
Oracle v5	5.0.22 (5.1.17)	1985	5.1.22		Support for client/server computing and <u>distributed database systems</u> . First version available for <u>OS/2</u> . ^[11]
Oracle v6	6.0.17	1988	6.0.37		Row-level locking, scalability, online backup and recovery, <u>PL/SQL</u> . First version available for <u>Novell Netware 386</u> . ^[12]
Oracle 6.2	6.2.0				Oracle Parallel Server
Oracle7	7.0.12	June 1992			PL/SQL stored procedures, Triggers, Distributed 2-phase commit, Shared Cursors, Cost Based Optimizer
Oracle 7.1	7.1.0	May 1994			Parallel SQL Execution. First version available for <u>Windows NT</u> . ^[13]
Oracle 7.2	7.2.0	May 1995			Shared Server, XA Transactions, Transparent Application Failover
Oracle 7.3	7.3.0	February 1996	7.3.4		Object-relational database
Oracle8 Database	8.0.3	June 1997	8.0.6		Recovery Manager, Partitioning. First version available for Linux. ^[14]
Oracle8i Database	8.1.5.0	1998	8.1.7.4	August 2000	Native internet protocols and Java, Virtual Private Database
Oracle9i Database	9.0.1.0	2001	9.0.1.5	December 2003	Oracle Real Application Clusters (RAC), Oracle XML DB
Oracle9i Database Release 2	9.2.0.1	2002	9.2.0.8	April 2007	Advanced Queuing, <u>Data Mining</u> , Streams, Logical Standby
Oracle Database 10g Release 1	10.1.0.2	2003	10.1.0.5	February 2006	Automated Database Management, Automatic Database Diagnostic Monitor, Grid infrastructure, Oracle ASM, Flashback Database
Oracle Database 10g Release 2	10.2.0.1	July 2005 ^[15]	10.2.0.5	April 2010	Real Application Testing, Database Vault, Online Indexing, Advanced Compression, Data Guard Fast-Start Failover, Transparent Data Encryption

Oracle Database 11g Release 1	11.1.0.6	September 2007	11.1.0.7	September 2008	Active Data Guard, Secure Files, Exadata
Oracle Database 11g Release 2	11.2.0.1	September 2009 ^[16]	11.2.0.4	August 2013	Edition Based Redefinition, Data Redaction, Hybrid Columnar Compression, Cluster File System, Golden Gate Replication, Database Appliance
Oracle Database 12c Release 1	12.1.0.1	July 2013 ^[17]	12.1.0.2	July 2014	Multitenant architecture, In-Memory Column Store, Native JSON, SQL Pattern Matching, Database Cloud Service
Oracle Database 12c Release 2	12.2.0.1	September 2016 (cloud) March 2017 (on-prem)			Native Sharding, Zero Data Loss Recovery Appliance, Exadata Cloud Service, Cloud at Customer
Oracle Database 18c	18.1.0 // 12.2.0.2	February 2018 (cloud, Exadata) ^[18] July 2018 (other) ^[19]			Polymorphic Table Functions, Active Directory Integration, Transparent Application Continuity, Approximate Top-N Query Processing, PDB Snapshot Carousel, Online Merging of Partitions and Subpartitions
Oracle Database 19c	19.1.0 // 12.2.0.3	February 2019 (Exadata) ^[20] April 2019 (Linux) ^[21] June 2019 (cloud)			Active Data Guard DML Redirection, Automatic Index Creation, Real-Time Statistics Maintenance, SQL Queries on Object Stores, In-Memory for IoT Data Streams, Hybrid Partitioned Tables, Automatic SQL Plan Management, SQL Quarantine, Zero-Downtime Grid Infrastructure Patching, Finer-Granularity Supplemental Logging, Automated PDB Relocation
Oracle Database 21c	21.1	December 2020 (cloud) ^[22]			Blockchain Tables, Multilingual Engine - JavaScript Execution in the Database, Binary JSON Data Type, Per-PDB Data Guard Physical Standby (aka Multitenant Data Guard), Per-PDB GoldenGate Change Capture, Self-Managing In-Memory, In-Memory Hybrid Columnar Scan, In-Memory Vector Joins with SIMD, Sharding Advisor Tool, Property Graph Visualization Studio, Automatic Materialized Views, Automatic Zone Maps, SQL Macros, Gradual Password Rollover
Legend: ■ Old version ■ Older version, still maintained ■ Latest version					

The [Introduction to Oracle Database \(https://docs.oracle.com/en/database/oracle/oracle-database/19/cncpt/introduction-to-oracle-database.html#GUID-43F9DD5C-8D8C-4E61-A2B4-5C05907D3CEC\)](https://docs.oracle.com/en/database/oracle/oracle-database/19/cncpt/introduction-to-oracle-database.html#GUID-43F9DD5C-8D8C-4E61-A2B4-5C05907D3CEC) includes a brief history on some of the key innovations introduced with each major release of Oracle Database.

Patch updates and security alerts

Oracle Corporation releases Critical Patch Updates (CPUs) or Security Patch Updates (SPUs)^[23] and Security Alerts to close security vulnerabilities. These releases are issued quarterly; some of these releases have updates issued prior to the next quarterly release.

Market position

A 2016 Gartner report claimed to show Oracle holding #1 RDBMS market share worldwide based on the revenue share ahead of its four closest competitors – Microsoft, IBM, SAP and Teradata.^[24]

Competition

In the market for relational databases, Oracle Database competes against commercial products such as IBM's DB2 UDB and Microsoft SQL Server. Oracle and IBM tend to battle for the mid-range database market on Unix and Linux platforms, while Microsoft dominates the mid-range database market on Microsoft Windows platforms. However, since they share many of the same customers, Oracle and IBM tend to support each other's products in many middleware and application categories (for example: WebSphere, PeopleSoft, and Siebel Systems CRM), and IBM's hardware divisions work closely with Oracle on performance-optimizing server-technologies (for example, Linux on IBM Z). Niche commercial competitors include Teradata (in data warehousing and business intelligence), Software AG's ADABAS, Sybase, and IBM's Informix, among many others.

Increasingly, the Oracle database products compete against such open-source software relational and non-relational database systems as PostgreSQL, MongoDB, Couchbase, Neo4j and others. Oracle acquired Innobase, supplier of the InnoDB codebase to MySQL, in part to compete better against open source alternatives, and acquired Sun Microsystems, owner of MySQL, in 2010. Database products licensed as open-source are, by the legal terms of the Open Source Definition, free to distribute and free of royalty or other licensing fees.

See also

- Comparison of relational database management systems
- Comparison of object–relational database management systems
- Database management system
- List of relational database management systems
- List of databases using MVCC

References

1. "Oracle Database 19c : Now available on Oracle Exadata" (<https://blogs.oracle.com/database/oracle-database-19c-available-exadata>). 13 February 2019. Retrieved 23 December 2020.

2. Lextrait, Vincent (March 2016). "The Programming Languages Beacon, v16" (<https://archive.is/20120530/http://www.lextrait.com/Vincent/implementations.html>). Archived from the original (<http://www.lextrait.com/Vincent/implementations.html>) on 30 May 2012. Retrieved 15 December 2016.
3. "OTN Standard License" (<http://www.oracle.com/technetwork/licenses/standard-license-152015.html>), *Technical network*, Oracle.
4. "Multimodel Database with Oracle Database 12c Release 2" (http://download.oracle.com/otndocs/products/spatial/pdf/12c/Multimodel_Database_with_Oracle_Database_12c_Release_2.pdf) (PDF). Oracle. Archived (https://web.archive.org/web/20170414083210/http://download.oracle.com/otndocs/products/spatial/pdf/12c/Multimodel_Database_with_Oracle_Database_12c_Release_2.pdf) (PDF) from the original on 14 April 2017. Retrieved 1 March 2017.
5. "Exadata" (<http://www.oracle.com/technetwork/database/exadata/exacm-ds-3409774.pdf>) (PDF), *Technical network*, Oracle.
6. "Welcome to Larryland" (<https://www.theguardian.com/g2/story/0,3604,215072,00.html>). *The Guardian*. Archived (<https://web.archive.org/web/20160825232818/https://www.theguardian.com/g2/story/0,3604,215072,00.html>) from the original on 25 August 2016. Retrieved 19 December 2009.
7. Julie Bort (29 September 2014). "Larry Ellison Is A Billionaire Today Thanks to the CIA" (<http://www.businessinsider.com/the-cia-made-larry-ellison-a-billionaire-2014-9?international=true&r=US&IR=T>). Archived (<https://web.archive.org/web/20170116143330/http://www.businessinsider.com/the-cia-made-larry-ellison-a-billionaire-2014-9?international=true&r=US&IR=T>) from the original on 16 January 2017. Retrieved 13 January 2017.
8. Departments of Informatics. "Oracle V2" (<http://cs-exhibitions.uni-klu.ac.at/index.php?id=403>). *Virtual Exhibitions in Informatics*. University of Klagenfurt. Archived (<https://web.archive.org/web/20190930122821/http://cs-exhibitions.uni-klu.ac.at/index.php?id=403>) from the original on 30 September 2019. Retrieved 30 September 2019.
9. Webster, Robin (13 November 1984). "PC Relational Database? New Answer is Oracle" (<https://books.google.com/books?id=-Ukz6hjZEA4C&pg=PA57>). *PC Magazine*. Retrieved 1 July 2019.
10. Gralike, Marco (4 April 2006). "Back to the future (Oracle 4.1 VM appliance)" (<https://technology.amis.nl/2006/04/04/back-to-the-future-oracle-41-vm-appliance/>). *amis.nl*. Archived (<https://web.archive.org/web/20190701142355/https://technology.amis.nl/2006/04/04/back-to-the-future-oracle-41-vm-appliance/>) from the original on 1 July 2019. Retrieved 1 July 2019.
11. Mace, Scott (30 January 1989). "DOS Version of Professional Oracle 5.1B Adds SQL Report Writer" (<https://books.google.com/books?id=MzoEAAAAMBAJ&pg=PA6>). *InfoWorld*. Retrieved 7 September 2019.
12. O'Brien, Timothy (29 April 1991). "Oracle8 on Linux shows promise" (<https://books.google.com/books?id=Gw0EAAAAMBAJ&pg=PA2>). *InfoWorld*. Retrieved 7 September 2019.
13. Nash, Kim (3 October 1994). "Oracle users ponder product overload" (<https://books.google.com/books?id=IrCYpCv7YXsC&pg=PA7>). *Infoworld*. IDG Enterprise. Retrieved 30 July 2020.
14. Biggs, Maggie (5 October 1998). "Oracle8 on Linux shows promise" (<https://books.google.com/books?id=sFEEAAAAMBAJ&pg=PA129>). *InfoWorld*. Retrieved 7 September 2019.
15. "Oracle Announces General Availability of Oracle® Database 10g Release 2" (https://web.archive.org/web/20180405025608/http://www.oracle.com/us/corporate/press/017324_EN). 11 July 2005. Archived from the original (http://www.oracle.com/us/corporate/press/017324_EN) on 5 April 2018. Retrieved 4 April 2018.
16. "Oracle® Database 11g Release 2 is Now Available" (<https://web.archive.org/web/20180405030158/http://www.oracle.com/us/corporate/press/032365>). 1 September 2009. Archived from the original (<http://www.oracle.com/us/corporate/press/032365>) on 5 April 2018. Retrieved 4 April 2018.

17. "Oracle Announces General Availability of Oracle Database 12c, the First Database Designed for the Cloud" (<https://web.archive.org/web/20130909145438/http://www.oracle.com/us/corporate/press/1967380>). 1 July 2013. Archived from the original (<http://www.oracle.com/us/corporate/press/1967380>) on 9 September 2013. Retrieved 9 September 2013.
18. "Oracle Database 18c : Now available on the Oracle Cloud and Oracle Engineered Systems" (<https://blogs.oracle.com/database/oracle-database-18c-:-now-available-on-the-oracle-cloud-and-oracle-engineered-systems>). *blogs.oracle.com*. 16 February 2018. Retrieved 28 April 2021.
19. Zagar, Adriana (23 July 2018). "Oracle Database 18c Now Available For On-Premises" (<https://web.archive.org/web/20200808182223/https://community.oracle.com/community/support/support-blogs/database-support-blog/blog/2018/07/23/oracle-database-18c-now-available-for-on-premises>). Archived from the original (<https://community.oracle.com/community/support/support-blogs/database-support-blog/blog/2018/07/23/oracle-database-18c-now-available-for-on-premises>) on 8 August 2020. Retrieved 16 January 2020.
20. Giles, 1Dominic (13 February 2019). "Oracle Database 19c Now Available on Oracle Exadata" (<https://blogs.oracle.com/database/oracle-database-19c-now-available-on-oracle-exadata-v3>). *blogs.oracle.com*. Retrieved 27 April 2021.
21. Hardie, William (25 April 2019). "Oracle Database 19c Now Available on Linux" (<https://blogs.oracle.com/database/oracle-database-19c-now-available-on-linux-v3>). *blogs.oracle.com*. Retrieved 27 April 2021.
22. "Oracle Database 21c" (<https://docs.oracle.com/en/database/oracle/oracle-database/21/index.html>). *Oracle Help Center*. Retrieved 9 December 2020.
23. Baransel, Emre (2013). *Oracle Data Guard 11gR2 Administration Beginner's Guide* (https://books.google.com/books?id=bnx9_MkBimcC). Packt Publishing Ltd. ISBN 9781849687911. Archived (https://web.archive.org/web/20161123144706/https://books.google.com/books?id=bnx9_MkBimcC) from the original on 23 November 2016. Retrieved 15 January 2014. "You should not get confused between Critical Patch Update (CPU) and Security Patch Update (SPU) as CPU terminology has been changed to SPU from October 2012."
24. "Login Page" (<https://www.gartner.com/document/3769150>). *www.gartner.com*. Retrieved 15 December 2017.

External links

- [Overview provided by Oracle Corporation \(https://www.oracle.com/technology/software/products/database/oracle10g/\)](https://www.oracle.com/technology/software/products/database/oracle10g/).
- [Oracle Licensing Knowledge Net \(http://omtco.eu/references/oracle/\)](http://omtco.eu/references/oracle/).

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