SAP SQL Anywhere

SAP® SQL Anywhere®: Release 17 Facts

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SAP

The Best-Run Businesses Run SAP®

SAP® SQL Anywhere®, Developer Edition

The developer edition of the SAP® SQL Anywhere® suite is offered at no charge for development and testing. It includes all of the features of the deployment versions of SAP SQL Anywhere and will not expire at any time. Download your copy at https://go.sap.corp/sa17developer.

New features or significant enhancements available with release 17 of SAP SQL Anywhere are listed in orange in the sections that follow.

SERVER FOR SAP SQL ANYWHERE
System Requirements and Supported Platforms
- Microsoft Windows x86 and x64
- Linux x86, x64, and ARMv6
- Oracle Solaris SPARC and x64
- Apple OS X
- IBM AIX
- HP-UX Itanium
- Database server: requires a minimum of 512 MB RAM
- Database client: requires a minimum of 8 MB RAM and 4 KB per client connection (8 KB for Unix)

Client/Server Communications Protocols
- TCP/IP
- Shared memory
- IPv6 support for Windows and Linux

Compliance
- Entry-level ANSI SQL-92 plus extensions
- With minor exceptions, compliant with 2008 core specifications
- Transact-Structured Query Language (T-SQL)

Database Features
- Read-only, scale-out database configurations
- Web-based monitoring of database servers
- Spatial data
- Sequence generator
- Select from data manipulation language (DML) statements
- Row-level locking
- High-performance, self-tuning, and cost-based query optimizer
- Advanced query execution algorithms
- Dynamic cache sizing
- Materialized views
- Snapshot isolation
- Full text search
- Column compression
- SQL and Java triggers and stored procedures
- External embedded SQL, Open Database Connectivity (ODBC), Java, CLR (.NET), Perl, PHP, and JavaScript stored procedures
- Binary large object (BLOB) support
- Import-export of XML files and SQL/XML (SQLX) functionality
- JavaScript object notation (JSON) in the database
- Database mirroring and cluster support
- Nonblocking index and column creation
- Online table and index defragmentation
- Online backup

- Online rebuild
- Event scheduling and handling
- In-memory mode
- Web service production and consumption
- Integrated HTTP/HTTPS server
- Remote data access to other relational data-base management systems (RDBMSs) and file systems
- Online analytical processing (OLAP) query support
- Internationalization features, including nchar data type, accent sensibility, Unicode collation algorithm, International Components for Unicode (ICU) support, database time zones, and TIMESTAMP WITH TIMEZONE data type
- Windows Performance Monitor integration
- Strong encryption for database files and network communications
- Table encryption, customizable auditing, password rules, SHA-256 hash calculation, and Kerberos authentication
- Federal Information Processing Standard (FIPS) 140-2 conformance
- Role-based security
- Lightweight Directory Access Protocol (LDAP) user authentication
- Dual-control passwords
- Server disk sandboxing
- Event tracing
- Database isolation
- Enhanced auditing
- Processor affinity control
- Point-in-time recovery
- NCSLib and SAP Solution Manager support
- In-memory database validation

Database Features
- Spatial data
- Application profiling utilities
- Graphical schema design and reverse engineering tools
- Graphical database management and browsing tools
- Graphical query plan viewer, query editor, integrated stored procedure debugger, profiler and synchronization monitoring tool, and spatial data graphical viewer
- Index consultant
- Native data access through ADO.NET, OLE DB, ODBC3.5 (level 2), JDBC 3.0, embedded SQL, and Sybase Open Client
- Broad support for programming tools, including the SAP PowerBuilder® application development tool, Microsoft Visual Studio, Embarcadero Delphi, Eclipse, Node.js runtime environment, and many more
- Support for Microsoft .NET Framework version 2.0 and later
- Broad support for programming languages, C#, VB.NET, C/C++, ASP, ASP.NET, JSP, Java, PHP, Perl DBD, and JavaScript
- Advanced OLAP functionality including rollup, recursive union and index union, and intersection
- Accessibility support for people with disabilities in conformance with Section 508 of the U.S. Rehabilitation Act
- Row and array data types
- Try-catch error handling
- Open Data Protocol (OData) server and producer

- User locks
- Indirect identifiers and table reference values

Database Statistic
- Databases per server: 255
- Database size: limited only by memory, disk space, and platform restrictions
- Characters per database object name: 128

Table Statistics
- Indexes per table: up to 2,048
- Table size: limited only by file size
- Tables per database: up to 4 billion
- Columns per table: 45,000
- Field size: 2 GB
- Rows per table: limited only by file size
- Row size: limited by file size

Stored Procedure and Trigger Statistics
- Maximum length of stored procedure: 2 GB
- Stored procedures per database: up to 4 billion
- Triggers per database: up to 4 billion
- Nesting: limited by disk space and server memory

ULTRALITE
Supported Platforms for Deployment
- Apple iOS
- Android
- Windows Phone
- Windows Mobile
- Windows x86, x64, and ARM
- Linux x86, x64, and ARM
- Apple OS X

Database Features
- Spatial data
- Ultrasmall database with a fingerprint as small as 300 KB for handheld devices and smartphones
- Built-in synchronization client with background sync
- Strong data and communications stream encryption
- Transaction processing, referential integrity, multitable joins, and UNION operations
- High-performance updates and retrievals through use of indexes and query plans
- BLOB support
- Event notifications
- Dynamic cache sizing

UltraLite Database Statistics
- Database size: limited by available storage (maximum 2 GB)
- Row size: 16 KB, with additional space for BLOB data
- Table size: limited by database size
- Tables per database: limited only by device memory
- Rows per table: 16 million
- Columns per table: 65,535
- Tables referenced per transaction: no limit

SQL Support
- TIMESTAMP WITH TIMEZONE data type
- INSERT, UPDATE, DELETE, and SELECT statements
- Multitable joins
- Subqueries

- A wide range of SQL functions
- Aggregate functions
- GROUP BY clause
- UNION operation

SYNCHRONIZATION
Supported Platform
- Windows x86 and x64
- Linux x86 and x64
- Linux ARMv6 (synchronization client only)
- Solaris SPARC
- Apple OS X
- IBM AIX (synchronization server only)
- HP-UX Itanium (synchronization server only

MobiLink Features
- Reliable, bidirectional synchronization between remote and enterprise systems including SAP SQL Anywhere, SAP Adaptive Server® Enterprise, SAP IQ database software, Oracle, Microsoft Server, IBM DB2, MySQL, application servers, enterprise resource planning systems, and Web services
- Reliable bidirectional synchronization from SQL Anywhere and UltraLite databases to the SAP HANA® platform through the remote data sync option for SAP HANA
- Central administration of remote databases
- Monitoring of the MobiLink server and relay server farms
- Dynamic memory caching
- Wizard-based synchronization configurations
- Remote support for both SAP SQL Anywhere and UltraLite databases

- Multiple synchronization and network server-based protocols including TCP/IP, HTTP, HTTPS, and Microsoft ActiveSync
- End-to-end encryption
- Optional strong 128-bit encryption for synchronization of communication, including Secure Sockets Layer/Transport Layer Security (SSL/TLS) protocols using RSA encryption compatible with HTTP servers
- Advanced conflict detection and programmable resolution
- High-availability option for MobiLink server farms
- Relay server for secure communications through Web servers
- Optimized for wireless synchronization
- Scalable to support thousands of remote databases from a single MobiLink server
- Support for horizontal and vertical subsetting of data
- Priority-based synchronization of multiple subsets of data
- File transfer
- Server-initiated synchronization and notification
- Broadcast downloads for bandwidth efficiency
- Embeddable synchronization logic using Java or Microsoft Visual Studio
- Flexible user authentication logic
- API for C++ and .NET applications to launch and monitor synchronization
- LDAP user authentication
- Multithreaded network processing
- Support for digital client certificates (also called passports) and NCSLib logging
- Offline OData

SQL REMOTE FEATURES
- Reliable, bidirectional message-based synchronization
- Multiple synchronization and network protocols including File Transfer Protocol (FTP), file-based e-mail (using VIM, MAPI, or SMTP)
- Advanced conflict detection and programmable resolution
- Support for wireless synchronization
- Scalable to support thousands of remote databases
- Support for horizontal and vertical subsetting of data
- Database management support from SAP SQL Anywhere

COMMUNITY NETWORK FOR SAP® SQL ANYWHERE® SOLUTIONS

[SAP Community Network](#) is a place for engaging with peers who can assist you with your projects for implementing SAP® SQL Anywhere® solutions. It also gives you access to the [developer center for SAP SQL Anywhere](#), white papers, Web casts, and many other materials that can help support your specific use of SAP SQL Anywhere.

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