

Oracle JDBC, UCP, OJVM Features, and Open Source Projects Timeline

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23ai

AI Vector Search Support

Mission Critical Features

- Self-Driven Diagnosability
- Sharding Enhancements (XA Transactions, Directory-based Sharding)
- TAC Enhancements (Server-side templates, Draining with batches, Resumable cursor support, and Auto-enabling on all Oracle JDBC data sources, AC with DRCP)

Security

- Radius 2FA, Easy Connect for LDAP/LDAPS, Thumbprint-based cert selection, Longer passwords (1024b), Caching SSLContext (23.6), Support for PEM files (23.6), TLSv1.3 (23.6), SNI Support (23.7), Kerberos Constrained Delegation, & OJVM Security Enhancements

Java performance and scalability

- True Cache Datasource
- DRCP (Multi-Pool & Tagging support)
- Reactive Extensions for UCP
- JDBC Support for Database Pipeline (using Reactive Prog)
- Improvements with executeBatch() & executeBatchLarge()
- TCP Fast Open (TFO) lib Installer (23.4)
- Sessionless Transactions (v23.6)
- Reactive Streams Ingest (RSI) in Data Loader Mode

Ease of Development

- Built-in JDBC Config Providers (FileSystem, HTTPS)
- Relational-JSON Duality Views
- ParameterMetaData Enhancements
- Support for BEQ in JDBC-Thin
- Native Boolean and JSON datatypes
- Oracle JVM Web Services Callout Enhancement

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- Easy Connect Enhancements
- IAM Token Auth support (19.13.0.0.1+)
- OAUTH2 Token Support (19.16.0.0.1+)
- TAC (Server-side draining, DRCP support, MODP support in TAC, UCP In-band draining support for ADB-S (19.12))
- JDBC Support for FAN events
- Shard Routing APIs for mid-tiers (UCP)

12.2.0.1

- Application Continuity (AC)
- Transaction Guard (TG)
- Oracle Database Sharding Support
- Database Resident Connection Pooling (DRCP)
- SQL Statement Translation
- SHA2 Support in Oracle Advanced Security
- TLSv1.2 support (12.2.0.2+)
- Invisible Columns Support
- Support for PL/SQL Package Types as Parameters
- Support for Monitoring of Database Operations
- Support for Increased Length Limit for Various Data Types
- Implicit Results Support
- Support for row count per iteration for array DML
- Oracle JVM Web Services Callout

2024

2021

2019

2018

2017

2009

Open Source Projects

- JDBC Driver extensions v1.0.6: Config Providers and Resource Providers for OCI, AWS, Azure, GCP, HashiCorp Cloud Platform (HCP) and the OSOON Provider for Jackson, and OpenTelemetry
- Oracle Database Operator for Kubernetes v1.2.0 (Apr 2025)
- Oracle Database Embedding Store for LangChain4j (2024)
- Oracle Database Connector for Semantic Kernel (2025)
- App Stack for Java v0.1.5 (Mar 2024)
- Oracle R2DBC Driver v1.3.0 (Nov 2024)
- Oracle Database Navigator IntelliJ Plugin v3.6.2.0 (Sep 2025)
- OCI Toolkit for Eclipse v1.4.0 (Dec 2023) & OCI Toolkit for IntelliJ v1.2.0 (Jun 2025)

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- Reactive Streams Ingest (RSI)
- JDBC Reactive Extensions
- Java Virtual Threads support
- Sharding Enhancements (Java DataSource for Sharded Database Access, Shard Connection Statistics)
- JSON Support via oracle.sql.json
- UCP Support in JBOSS
- TAC Enhancements (AC Statistics MBean, UCP draining using in-band notification)
- OJVM (RAC Rolling, DG Standby First Rolling)

Open Source Projects

- GraalVM Native Image Support
- Oracle Database Operator for Kubernetes v0.1.0 (Oct 2021)
- OCI Toolkit for IntelliJ v0.1.0 (Oct 2021)
- OCI Toolkit for Eclipse v1.3.2
- Oracle R2DBC (March 2021 - Requires 21.7 JDBC driver)

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- Transparent Application Continuity (TAC) (Concrete classes support, Implicit request boundaries)
- Support for verifying JSON Data
- Client Side ResultSet Cache
- Support for Lightweight Connection Validation
- Support for REF CURSOR as IN bind variables
- Accessing PL/SQL associate arrays
- Security Enhancements (Support for Key Store Service (KSS) and HTTPS Proxy configuration, Automatic Provider Resolution (OraclePKIProvider))
- ojdbc.properties file and TNS_ADMIN as connection property

11.2

- TimeZone Patching
- Secure LOB Support
- LOB Prefetch Support
- Network Connection Pool
- Column Security Support
- XMLType Queue Support (AQ)
- Notification Grouping (AQ and DCN)
- SimpleFAN (simplefan.jar)