

# PROGRESS DATADIRECT FOR JDBC

## Highlights

- Unique Type 5 architecture and features across all major databases
- Common application code across databases supports interoperability
- One driver for each database regardless of version, platform
- Robust JDBC 3.0/4.0 specification feature set improves developer productivity
- Performance and scalability leader in SPECjAppServer/ ECPerf benchmarks
- Extensive test suite and customer deployments ensure unrivaled reliability

## High-Performance JDBC Drivers

Progress® DataDirect® and Connect XE® for JDBC™ is the world's only suite of Type 5 JDBC drivers for all major databases. Progress DataDirect for JDBC is the SPECjAppServer/ECPerf performance and scalability leader, and supports advanced functionality such as application failover, load balancing, bulk load, SSL data encryption, and OS (operating system) Authentication. Progress DataDirect for JDBC consistently supports the latest database features and is fully compliant with Java SE 6.0 and JDBC 5.0. Using Progress DataDirect for JDBC, developers can easily build database-independent applications; a common architecture across all major databases makes it easy to switch databases or upgrade to new versions of an existing database.

## Only Comprehensive Set of JDBC Drivers for All Major Databases

Progress DataDirect for JDBC offers the same high performance and rich functionality no matter what database you need to access—Oracle, DB2, SQL Server, Salesforce.com, Sybase, MySQL, Informix, database.com, force.com, and Progress® OpenEdge® 11 MT.

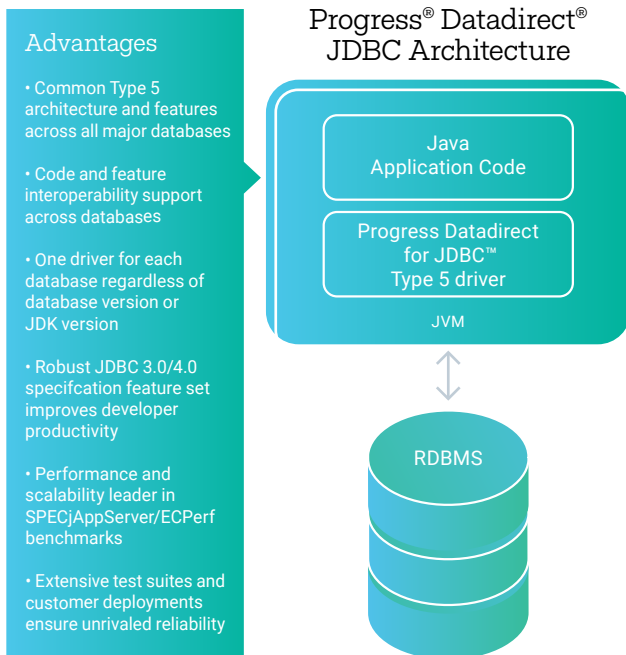
- Robust, configurable, high-availability functionality to Oracle, SQL Server, DB2, Salesforce.com, Sybase, and MySQL including transaction failover, load balancing, and more.
- One driver for each database regardless of database version or JDK version.
- Ability to enable functionality or tune for performance without the need to access and change application code.
- 100% Java DataDirect Bulk Load across all supported databases for dramatically improved JDBC Batch operations or simplifying bulk data movement.

- Full functionality is available across all supported JDK versions regardless of what platform they are running on.
- Full support for use and deployment with any app server or objectrelational mapping (ORM) technology including IBM Websphere, JPA, Oracle Weblogic, JBoss, Hibernate, Apache Tomcat, or Spring.
- A common architecture enables database-independent application development, reducing development effort and allowing developers to complete projects far more quickly.

## Unparalleled Performance and Scalability

Progress DataDirect JDBC drivers have been benchmarked against other drivers for a variety of database operations. In our test methodology, we compare the capacity and efficiency of the providers by isolating and testing these key variables: throughput, CPU efficiency, and memory usage.

- Superior throughput—DataDirect throughput is unmatched, on average processing 20-500% more work over competing JDBC drivers in a given time period. In one test that simulates a monthly report in which many records are fetched, the DataDirect driver delivers up to 1450% more throughput, and in most tests, Progress DataDirect driver throughput stays high and even increases as more users are added.
- Greater CPU efficiency—DataDirect drivers use considerably fewer CPU cycles to deliver superior throughput than competing drivers—in many cases, up to 150% more CPU efficient.
- Smaller memory footprint— DataDirect drivers use significantly less memory while doing more work than competing drivers—in some cases using almost one fifth (20%) of the memory of other drivers.



With a faster, more resource-efficient driver, you need less hardware to support your applications. This is particularly meaningful when your application is sharing resources with other applications deployed on a single server or running in a resource-limited environment typical of virtualization.

## Key features

Performance	Security	Enterprise Application Functionality	Driver Functionality	Specification Compliance /Support
<p>SPECjAppServer/ ECPerf performance benchmark leader</p> <p>Easy driver tuning with multiple connection tuning options</p> <p>JDBC Batch acceleration via Bulk Load</p> <p>Pooling and managing connections</p> <p>Statement pooling</p> <p>Data conversion</p> <p>Socket management</p> <p>Network wire management</p> <p>Batching and throughput optimization</p>	<p>Operating system authentication (i.e., Single Sign-on) via Kerberos</p> <p>SSL data encryption</p>	<p>Application failover and load balancing</p> <p>Ability to enable functionality or tune for performance without the need to change application code</p> <p>Bulk Load supported for all data sources</p> <p>Interoperability between databases and different versions of each database</p>	<p>Single driver JAR file can connect to any supported database version</p> <p>Fully internationalized—Unicode, double-byte, multi-byte</p> <p>JTA/JTS support</p> <p>Robust data type support such as BLOB/CLOB and timestamp values</p> <p>Savepoints</p> <p>Multiple open result sets</p> <p>Parameter meta data</p> <p>Testing and debugging tools</p>	<p>Java 7</p> <p>J2SE5</p> <p>Java SE 6.0</p> <p>JDBC 4.0</p> <p>JDBC 3.0</p> <p>J2EE Certified for 1.4, 1.3, 1.2 Compatibility Test Suites (CTS)</p> <p>Certified with J2EE Connector Architecture (resource adapters)</p> <p>Supports any Java-enabled platform that supports JDK 1.4 or higher*</p> <p>*JDK 6.0 or higher required to use JDBC</p>

The Progress DataDirect driver on average processes **20-500%** more work than competing drivers in a given time period, but occasionally as much as **1450%**.

Progress DataDirect JDBC drivers are up to **150%** more CPU efficient than competing drivers.

Progress DataDirect JDBC drivers use significantly less memory than competing drivers—in some cases using almost **one fifth (20%)** of the memory of other drivers.

# Technical Specifications

## Databases Supported

- Oracle 8i R2-R3, 9i R1-R2, 10g R1-R2, and 11g R1 and R2
- Microsoft SQL Server 7, 2000, 2005, 2008, and 2012
- Windows Azure SQL Database
- IBM DB2 UDB on:
  - Linux, Unix, and Windows - 8.x, V9.1 V9.5, V9.7, V10.1
  - z/OS - 8.x, V9.1, V10
  - iSeries (i5/OS) - V5R4, i6.1, i7.1
- Sybase Adaptive Server (ASE) 11.x, 12.x, 12.5.x, 15.0, 15.5, 15.7
- MySQL Enterprise database version 5.0.x, 5.1, 5.5
- Informix Dynamic Server version 9.2, 9.3, 9.4, 10, and 11.0, 11.5, and 11.7
- Salesforce.com (Salesforce.com support available with DataDirect XE for JDBC)
- Supports any Java-enabled platform that supports J2SE JDK 1.4 or higher
- Other: database.com force.com, OpenEdge 11 MT

To learn more or download a free, 15 day trial of Progress DataDirect for JDBC™, go to:

[progress.com/datadirect](http://progress.com/datadirect)

## About Progress

Progress (NASDAQ: PRGS) is a global leader in application development, empowering the digital transformation organizations need to create and sustain engaging user experiences in today's evolving marketplace. With offerings spanning web, mobile and data for on-premise and cloud environments, Progress powers startups and industry titans worldwide, promoting success one customer at a time. Learn about Progress at [www.progress.com](http://www.progress.com) or 1-781-280-4000.

## Worldwide Headquarters

Progress, 14 Oak Park, Bedford, MA 01730 USA Tel: +1 781 280-4000 Fax: +1 781 280-4095

On the Web at: [www.progress.com](http://www.progress.com)

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