

# PROGRESS® DATADIRECT® SHADOW® z/DIRECT

## MAINFRAME DIRECT DATA CONNECTIVITY

Access to proprietary mainframe data from distributed environments has been an evolving technological challenge. Progress® DataDirect® has led the advancement of industry standard database connectivity with its ODBC, JDBC and ADO.NET drivers. For mainframe data connectivity, Progress® DataDirect® Shadow® builds on this industry-leading technology to provide both SQL and SOAP interfaces to access a wide range of mainframe databases, all within a single integration architecture.

Progress® DataDirect® Shadow® z/Direct provides a high-performance set of call-level interfaces to data on the mainframe. Data definitions and schema information can be extracted from a variety of places to create standard relational metadata maps. All of the underlying mapping is transparent to the developer, who simply codes standard SQL calls. At runtime, this mapping capability translates the standard SQL into the appropriate calls for the underlying database.

## KEY FEATURES

- > ANSI SQL92
- > Industry-leading client drivers
- > Support for data services
- > Specialty engine/zIIP support
- > Relational to non-relational data mapping

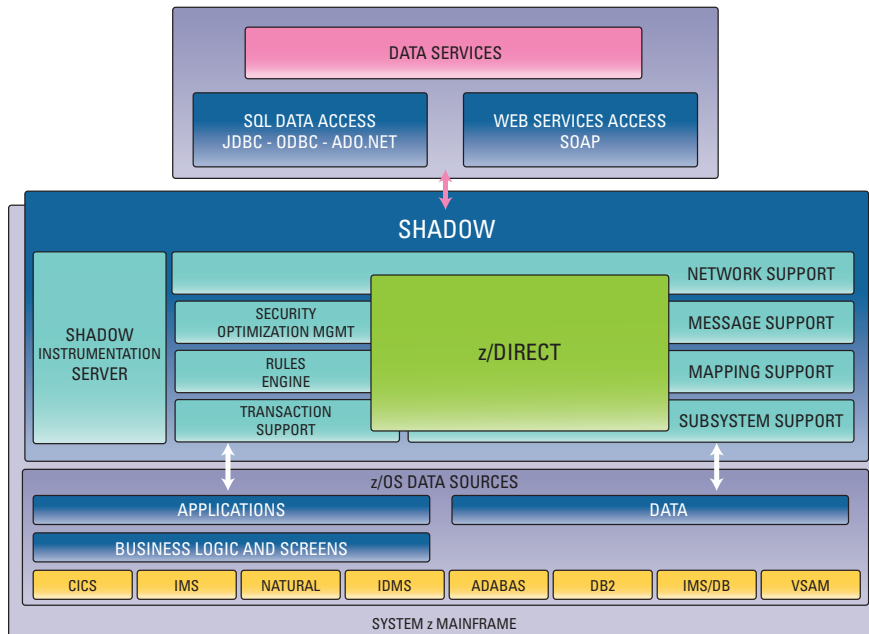
## COMPREHENSIVE MAINFRAME DATA ACCESS SUPPORT

DataDirect Shadow is the industry's most comprehensive platform for mainframe data connectivity and integration, providing through a virtual relational database model the availability of mainframe data through industry-standard SQL, SOAP and XML interfaces. Key features include:

<b>SHADOW FEATURES</b>				
<b>ANSI SQL 92</b>	<b>Industry-leading Client Drivers</b>	<b>Support for Data Services</b>	<b>Specialty Engine/zIIP support</b>	<b>Data Mapping Facility</b>
A consistent data access method in support of the ANSI SQL92 standard across all Shadow-supported databases—Adabas, DB2, IAM, IMS DB, VSAM	Shadow includes the DataDirect Connect high performance, wire-protocol driver technology, supporting: <ul style="list-style-type: none"> <li>&gt; ODBC 3.5.2 for 32-bit and 64-bit computing</li> <li>&gt; JDBC 3.0 Type 4 for 32-bit and 64-bit database drivers</li> <li>&gt; ADO.NET data providers</li> </ul>	A SOAP interface to mainframe data, providing more flexibility for developers	Diverts processing-intensive data queries to zIIP specialty engine beyond just DB2, to include IMS, VSAM, Adabas as well, reducing mainframe total cost of ownership (TOC) and improving performance	Generates DMF (data mapping facility) maps in Eclipse Studio, maps non-relational data to relational interface and maps transaction programs to virtual stored procedures

## SHADOW'S PATENT-PENDING TECHNOLOGY FOR REDUCING THE TCO OF MAINFRAME DATA ACCESS

The unique Shadow exploitation of IBM's mainframe specialty engine gives customers who have purchased the System z Integration Information Processor (zIIP) the ability to access mainframe data in place without the need for data replication or migration. This has the added benefit of diverting integration-related processing from the mainframe's General Purpose Processor to the unmeasured, non-speed-restricted environment of the special-purpose engine, providing the potential to dramatically lower mainframe total cost of ownership and significantly improve performance.



## INDUSTRY-LEADING CLIENT DRIVERS

Shadow z/Direct includes the industry's leading client drivers for high-performance data connectivity.

- > Progress® DataDirect Connect® for ODBC drivers deliver “wire protocol” and require no installation and maintenance of database client software and libraries, dramatically improving performance and eliminating the need to install and keep up with the various versions of database client libraries.
- > Progress® DataDirect Connect® for JDBC is the fastest and most comprehensive suite of Type 4 JDBC drivers for all major databases. Connect for JDBC is the SPECjAppServer/ECPerf performance and scalability leader and supports advanced functionality such as distributed transactions, connection pooling and updating BLOB/CLOB data types.
- > Progress® DataDirect Connect® for ADO.NET is the industry's only suite of ADO.NET data providers with a 100% managed architecture, eliminating the need for database clients, boosting performance and delivering a flexible, secure connection between .NET applications and mainframe datasources.

## ROBUST FEATURES TO ENSURE DATA INTEGRITY

Shadow z/Direct includes an array of robust features to ensure mainframe quality of service, including:

<b>SHADOW z/DIRECT FEATURES</b>			
Metadata Support	Dynamic-to-static SQL Facility	XA Two-phase Commit Support	VSAM/QSAM Support
Full relational metadata support for dynamic integration with development environments and business intelligence tools	Enables organizations that rely on DB2 for z/OS to gain the benefits of static SQL, including lower resource consumption and faster performance for dynamic SQL. Benchmarks performed in the DataDirect mainframe development lab indicated the Dynamic-to-Static Facility improved performance by up to 70%.	Transactional access to the data subsystem is achieved via the Resource Recovery Services (RRS)-enabled RRS Attachment Facility (RRSAF) interface.	Shadow can be extended to provide high-performance integration with mainframe VSAM and QSAM sequential files, with or without CICS: update access is delivered via Shadow support inside CICS where organizational data integrity policy insists on CICS ownership of VSAM data.

## MAKE THE MOST OF YOUR MAINFRAME-BASED DATA RESOURCES

Shadow z/Direct lets you leverage your mainframe data resources in new ways that do not compromise the transaction capacity and reliability of your legacy database while providing new innovations for improving performance and lowering mainframe TCO.

### PROGRESS SOFTWARE

Progress Software Corporation (NASDAQ: PRGS) is a global software company that enables enterprises to be operationally responsive to changing conditions and customer interactions as they occur. Our goal is to enable our customers to capitalize on new opportunities, drive greater efficiencies, and reduce risk. Progress offers a comprehensive portfolio of best-in-class infrastructure software spanning event-driven visibility and real-time response, open integration, data access and integration, and application development and management—all supporting on-premises and SaaS/cloud deployments. Progress maximizes the benefits of operational responsiveness while minimizing IT complexity and total cost of ownership.

### WORLDWIDE HEADQUARTERS

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Rev. 10/09 6525-128327

