Better business intelligence through high-performance data connectivity to your data sources—on-premises and in the cloud.

Organizations are desperate for 360-degree views of their business for better decision making.

Overview: Challenges for BI Providers

As a provider of business intelligence software and services, you need to deliver a leading-edge solution to your customers for 360-degree views of their business that empowers them to discover trends, visualize their impact, and display findings through the use of real-time business dashboards. In designing superior BI and analytics applications, you will likely encounter these data connectivity challenges including how to:

- Deliver broad connectivity that links to both on-premises and cloud data sources
- Aggregate and manage large data sets from multiple sources
- Provide more robust data security that lowers risk and meets compliance requirements
- Provide faster data connectivity with high performance and scalability across systems, devices, applications, and people
- Leverage SQL-based data access to provide the fastest and most open way to access and analyze data
By 2020, 35 zettabytes worth of data will be created, and 1/3 of that data will be stored in or will have passed through the cloud*

Gaining Easy Access to All Your Data

To avoid custom integration costs, you also need to enable standard and easy access and connectivity to data, wherever it resides—whether it’s in the cloud or on-premises behind a firewall.

Managing, integrating and connecting to today’s broad spectrum of data sources—each with different proprietary APIs and data schemas—is a complex challenge. As a BI vendor, it is critical to make heterogeneous data from different sources compatible, so that usable information can be easily extracted. This information must then be collated, correlated and converted into real insight that enables effective business decisions.

90 percent of the world’s existing data has been created in the last two years*

Using Rapid and Standardized Access for Better BI

To analyze and fully leverage the explosion of data sources for BI, you need a standardized way to interact with it. For example, many data sources are from Software-as-a-Service (SaaS)-based applications, which expose a custom, non-standard interface that makes BI virtually impossible. You also need a simple, cost-effective way to access and analyze new and emerging data sources (including in-memory databases such as SAP HANA; NoSQL databases like MongoDB and Cassandra; and Hadoop-related data sources).

Another challenge is how to best access the vast amount of “dark data” lurking in legacy data stores to make more accurate business decisions. You need both high-performance connectivity and the ability to adapt to the data source to rapidly process large volumes of data. Insights from hidden dark data are only possible with premium high-performance connectivity to the broad range of data sources in heterogeneous environments today.

2.5 quintillion bytes of data are generated by people every day – an explosion of data*
Adopting a New Approach to Improve Data Analysis

This explosion of data also requires adopting a new approach for the storage and analysis of structured and multi-structured data. To get the most complete perspective, you need to integrate big data’s external and social data sources with your corporate data.

You also need to analyze increasing volumes of data stored in SQL and NoSQL systems, and you need to do it directly against the data itself because transmission and storage requirements are simply beyond what the average BI tool can handle. As a result, you need to write to a huge variety of systems, optimize the performance of each of them to meet data volume demands, and address the behavioral differences and unique error handling for each type.

Leveraging Progress DataDirect Connectivity

Progress DataDirect solutions for Business Intelligence improves decision-making by providing key information efficiently and quickly, empowering your customers to make fast and informed decisions based on the most current data. A unique advantage for Progress DataDirect in BI is high efficiency and throughput, resulting in real-time data access, consistent performance and connectivity across all data sources. Plus, Progress DataDirect is function-rich and provides security, quality, performance, and full standards compliance.

Our proven connectivity solutions demonstrate performance, reliability, and interface simplification that can help your BI tools accelerate discovery and visualization while simplifying the user experience for end users. Improved performance increases value and better reliability improves customer satisfaction. And a simplified interface means you write and maintain less code, which translates into significant cost savings.

Hybrid Data Pipeline Uses Innovative Technology to Access Data Residing On-Premises, Behind a Firewall

The data connectivity service in Progress Hybrid Data Pipeline uses a patented approach to access relational data stored on-premises using the cloud. Typically when importing on-premises data into cloud-based BI tools, you have to open firewall ports, do manual exports and uploads, or use some other custom approach. With Progress DataDirect technology embedded into your cloud BI tool, the connectivity service can pull the on-premises data from the cloud with an approach that is extremely user friendly and secure.
Data Connectivity to a Broad Spectrum of Data Sources with Universal SQL Access

Progress DataDirect provides direct, real-time data access to a wide variety of data sources and the most popular business applications. Progress DataDirect Hybrid Data Pipeline is a powerful service that provides a single, standard data interface to a wide variety of popular SaaS and on-premises applications. Progress DataDirect Hybrid Data Pipeline acts as universal translator, taking various industry standards and transforming them into a single consistent standard. Using SQL queries, your diverse data sources appear as relational databases.

This capability means you can access data from applications such as Salesforce.com and Microsoft Dynamics just like a relational database. This innovation simplifies your data integration challenges with a turnkey solution. You no longer need specialized IT skills to maintain integrations. Progress DataDirect Hybrid Data Pipeline frees you to focus on your business and your customers, knowing that your data connectivity needs are in trusted hands.

Progress DataDirect provides robust connectivity to your data sources – on-premises and in the cloud.
Simplification and Scalability – Easily Add New Data Sources Accessed with SQL

Many relational connectivity solutions require the use of “client libraries” to connect to a particular version of a database, and they are often tied to a version or small range of versions. With more pieces to embed and manage, it means more overhead in setup and configuration—and more chance for errors. Progress DataDirect doesn’t require a client library because it speaks directly to the database using its own wire protocol, with fewer parts to manage and fewer chances for errors associated with connectivity. This includes the differences in error handling between the data sources, how they represent data types (such as dates and currencies), and even which query features they support. Progress DataDirect makes it easy for you to build connectivity to many sources because all of this is standardized. You can easily add new data sources that you can access either directly or through the Progress DataDirect Hybrid Data Pipeline.

Cross-Platform Support with Access to Your Data, On-Premises and in The Cloud

Progress DataDirect provides a heterogeneous data connectivity layer across different operating systems, across clouds, and even between cloud and on-premises. For example, because Microsoft is the vendor of SQL Server, they provide connectivity only to SQL Server from Microsoft Windows. If you have a Linux or Mac-based BI tool that needs to pull data in from SQL Server, Progress DataDirect provides a SQL Server driver for Linux and Unix. A cloud-based BI tool such as Tableau Cloud knows that most data is still locked away in Excel files and SQL Server running on-premises. When the corporate firewall and security prevents access to that data, Progress DataDirect uses its patented solution that makes on-premises data securely available in the cloud without having to open firewall ports—making it easy for users to get the data they need while still protecting it from unauthorized access.

Lightning-Fast Data Connectivity, with High Performance and Efficient Usage of Resources

Your analytics tools must differentiate you from your competitors. A tool that requires hours to import data and more than 10 seconds to refresh visualizations can be seen as cumbersome and painstaking. However, a tool that can quickly bulk load large volumes of data and query it in seconds is viewed as nimble and a competitive advantage, helping to drive tangible results for the business. Progress DataDirect is architected with high throughput, application failover, and efficient connectivity to provide the highest performance and efficiency in data connectivity. Fast data access is essential for dashboards that update constantly or for live discovery against the data.
Customer satisfaction and perception are also very important to you, and quality is built into Progress DataDirect’s proven connectivity. In fact, Progress DataDirect’s connectivity is used by hundreds of companies around the world, including many of the largest and most demanding of data providers and data consumers.

Progress DataDirect solutions are rigorously tested and certified to ensure compliance with standards, validation of the performance and scalability characteristics, and ability to perform under the most extreme data pressures.

**SQL Connectivity Crystallizes Data Access**

To address the data integration challenges pervasive in BI solutions, SQL connectivity crystallizes analytics into a unified and consistent data access method. Being able to provide a simple, universal way of accessing multiple sources frees your developers or your customers from learning new APIs or to changing applications when APIs change.

Progress DataDirect provides high-performance, scalable, and consistent access to all of those new data sources both on-premises and in the cloud using SQL. With SQL, Progress DataDirect treats every data source as a relational database, a more simplified way of processing the data and accessing it in real time.

**Success Powered by Progress**

Progress shares a common passion with you – data. Your strength lies in processing large amounts of data quickly and turning it instantly into visualizations that translate into actionable business intelligence. Progress provides the data connectivity you need across the organization, feeding that data into the BI tool. Building out connectivity to every data source that your customers need requires an enormous amount of resources, time, and money. Although you may not provide data connectivity out of the box, you likely support one of the data access standards that matter most – ODBC, JDBC, or OData (REST). By embedding Progress DataDirect connectivity within your application, you provide powerful built-in connectivity that your customers and end users need to drive success in the marketplace.

**Let’s Continue The Conversation**

Find out more about Progress DataDirect, visit [www.progress.com/datadirect](http://www.progress.com/datadirect)

Progress is a global software and services company with offices in more than twenty countries. Since 1981, more than 100,000 end users and 140,000 enterprises in 125 countries have invested in Progress technology to help meet their business objectives.

**About Progress**

Progress (NASDAQ: PRGS) offers the leading platform for developing and deploying mission-critical business applications. Progress empowers enterprises and ISVs to build and deliver cognitive-first applications that harness big data to derive business insights and competitive advantage. Progress offers leading technologies for easily building powerful user interfaces across any type of device, a reliable, scalable and secure backend platform to deploy modern applications, leading data connectivity to all sources, and award-winning predictive analytics that brings the power of machine learning to any organization. Over 1,700 independent software vendors, 80,000 enterprise customers, and 2 million developers rely on Progress to power their applications. Learn about Progress at [www.progress.com](http://www.progress.com) or +1-800-477-6473.

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