

IBM Data Management Platform for EDB Postgres Enterprise

An Integrated PostgreSQL platform
spanning procurement, deployment,
use, management and support

Highlights

- A single source for purchasing, deployment, and support of EDB Postgres Enterprise based on PostgreSQL
- A great open-source based alternative to Oracle
- A complete Database management solution with technology designed to improve security, integration, availability, performance, and efficiency
- Leverage IBM's expertise and global footprint

PostgreSQL is the 2nd most popular open source database¹. It has gained its following by striving to provide a highly extensible and standards compliant object-relational database. PostgreSQL also provides concurrency without read locks for ACID compliance. However, the use of PostgreSQL runs into some standard open source problems: how to scale, integrate, secure, and manage the technology on an enterprise-grade level.

EDB has worked to augment PostgreSQL with their own technology to address many of these concerns including management, replication, and failover just to name a few. Now, IBM in partnership with EDB takes that one step further. IBM® Data Management Platform for EDB Postgres Enterprise simplifies the enterprise PostgreSQL experience by packaging together nine PostgreSQL and EDB technologies into a single, integrated offering.

In addition to this one-stop experience for the procurement, use, and management of PostgreSQL, users will gain access to IBM's global deployment capabilities and expert support which includes client consultancy on individual open source database technologies and overall solution architectures. Each component of IBM Data Management Platform for EDB Postgres Enterprise is discussed in greater depth below.

Postgres Advanced Server

The core component of IBM Data Management Platform for EDB Postgres Enterprise is Postgres Advanced Server. This augmented version of the open source PostgreSQL code improves enterprise-readiness with greater security, user efficiency, and compatibility with other databases and deployment options.²

Security

Open source, due to its nature needs to be improved with greater security functionality when used inside of an organization. In many cases, this requires additional work for DBA to integrate the open source technology into existing security measures. With EDB Postgres Advanced Server, more layers of security have already been added. These include password policy enforcement, support for regulatory compliance, the ability to track and audit the data someone accessed and at what time they did so, and protection of code from prying eyes or malicious additions.

Efficiency

Pre-packaged utility functions help developers design applications faster and include more advanced capabilities helping developers save time that would have otherwise been wasted identifying and correcting code errors or designing their own advanced code. DBAs will also be able to avoid undue time spent on database upkeep tasks and can prioritize workloads without risking slower responses. Finally, queries that are running slow can be automatically identified for tuning saving search time and improving effectiveness.

EDB Postgres Replication Server

EDB Postgres Replication Server allows users to apply single master replication (SMR) and multi-master replication (MMR) each of which provide significant advantages. The management GUI also helps with scheduling replication times, reviewing replication history, and monitoring replication in real time.⁴

Performance

Replication can aid performance in several ways depending on the features of the replication server in question. The ability to disperse database masters geographically means that users can access the database closer to where they reside, reducing lag. Time and effort spent on ETL workloads is also reduced, or in some cases eliminated. The log-based replication technology found in Postgres Replication Server also makes replication happen faster and support higher user volumes and larger workloads. Read replicas are also valuable, so that reporting can be done on the replica. This reduces strain on the master, which in turn leads to improved processing performance on the master.

Efficiency

Even with greater performance, efficiencies can also be found with the right replication technologies. Postgres Replication Server's compatibility helps integrate lower cost systems with proprietary databases like Oracle Active Data Guard or SQL Server. In addition, data redundancy and latency are reduced with the ability to replicate subsets of tables as opposed to the entire table.

Availability

Of course, one of the primary responsibilities of replication is to heighten availability. This is true for unexpected failures, where queries can be redirected to another master database almost instantly, and scheduled maintenance, which limits interruptions by again switching over to another master database with considerable speed.

Multiple integration and deployment options including Oracle support

The ability to deploy EDB Postgres widely across on premises and cloud options helps break vendor lock-in and allows organizations to move workloads to where they are best suited based on price and performance at a certain moment in time.

Postgres Advanced Server's compatibility with Oracle provides several advantages. Foremost, should you wish to migrate from Oracle, it can be done more quickly and with less recoding. Doing so, users can still employ the skills they've built up while working with Oracle. Users will find that greater integration with Oracle offerings is possible with compatibility support for SQL, PL/SQL, and Replication.

EDB Postgres Enterprise Manager

Some of the most critical and time-consuming parts of database administration and development are related to database management. Postgres Enterprise Manager simplifies these tasks across on-premises, virtualized, and cloud deployments by providing broad monitoring, an impressive interface, and helpful advice.³

Monitoring

Postgres Enterprise Manager makes the prospect of managing databases much easier. Ready-to-use dashboards or custom ones provide a sense of how operations are proceeding from a current and historical perspective. In addition, alerts can be set up, so that even when not actively monitoring the databases, there is a safety net to catch anything unexpected. These can be built into dashboards within Postgres Enterprise Manager or other monitoring tools. Email and SNMP alerts are also an option.

Interface

The user interface of Postgres Enterprise Manager eases the day-to-day tasks of DBAs. For example, it helps write and execute queries. Furthermore, it makes adding new servers and configuring replication more straightforward. It even simplifies server log configuration. So, while it's not possible for these tasks to go away entirely, they can be done much more efficiently.

Advice

User performance can also be improved thanks to the advice provided by Postgres Enterprise Server Manager. The SQL Profiler feature can be automated to detect slow SQL queries and provide troubleshooting. Wizards also suggest industry standard configurations, analysis, and tuning.

Postgres Data Adapters

The Postgres Data Adapters exist to bring a company's data together in one holistic view, whether that happens to be 360° views of the customer or looking at an end-to-end view of a supply chain. Not being able to access all data as needed severely limits the insights that can be achieved.⁵

Unification

The Postgres Data Adapters unify the data experience, by using a single interface to bring multiple data sources together. For example, they allow you to connect to sources like Hadoop, MongoDB, and MySQL. This helps to manage the data as one unit rather than several different piece-parts. A logical data warehouse can be created without the need to copy data, making it much easier to analyze all data.

Choice

The level of unification provided also opens up more options for data storage and sourcing. Users can select the repository of best fit without needing to worry about barriers siloing that data off. Even NoSQL data can be analyzed by business intelligence applications using SQL, thanks to the adapters.

A wide variety of data sources can, therefore, be brought together including sets as disparate as archived data and clickstream data.

EDB Postgres Failover Manager

EDB Postgres Failover Manager works together with replication capabilities to promote high availability through fault tolerant clustering and redundant architecture. Continuous monitoring of the streaming replication clusters allows it to detect problems and automate failovers to a replica. In addition, DBAs who want to be more hands-on can choose to be notified about situations rather than have a response automated. They can also set up custom scripts that will be triggered in the event that a certain issue takes place. Much like replication, the same technologies that give DBAs peace of mind with Postgres Failover Manager can be used to avoid interruptions during maintenance like patching operating systems or software.⁶

EDB Postgres Backup and Recovery

While backup and recovery are extremely important to help avoid the loss of valuable data, they can be one of the least interesting and more error-prone tasks. EDB Postgres Backup and Recovery helps to automate certain functions to help mitigate these problems.⁷

Time and storage savings

Letting DBAs set their minds to more value-additive activities is a primary reason why businesses require backup and recovery automation technology. EDB Postgres Backup and Recovery stores backups in a central backup catalog allowing users to easily view them and quickly check their status for a more complete view. Users can also backup multiple databases via a single command line or as part of a pre-established schedule. And EDB Postgres Backup and Recovery can automatically check if backups have been altered or damaged instead of users needing to take time to check this on their own. In addition, compression technology helps to make the best use of storage.

Specificity

Many wish to have granular control over backups. EDB Postgres Backup and Recovery offers options to integrate with Linux cron jobs to help leverage existing architectures. In addition, the continuous archiving technology allows restorations to occur up until the moment before the error to avoid any data loss. Moreover, automated backups can be set to specific retention policies, whether internal or based on legal compliance. Tablespace restoration flexibility is also present. Users can restore into a custom path, which is useful when there have been changes to storage mapping. Full and incremental backups are both supported.

Postgres Migration Toolkit

Postgres Migration Toolkit aims to reduce that burden with technologies that smooth the overall experience. It is a command-line tool that offers granular control over migrating tables and data from other data management systems, including Oracle, to EDB Advanced Server. Both online and offline migration are available so that migration into a Postgres database can happen immediately in the case of the former or scripts can be generated to use later in the case of the latter. EDB's migration assessment service can also help identify potential migration problems.

The added advantage of IBM

IBM improves the value provided by the EDB Postgres offerings mentioned above with its considerable expertise, strong integration capabilities, and global presence.

Expertise

IBM has developed considerable experience across thousands of client engagements spanning decades. It shares that experience in two primary ways: Consultancy and Support. Those interested in integrating open source into their architectures should note that IBM experts are happy to consult on individual Open Source database technologies or the overall architecture of a business. In this way, an organization can leverage IBM's previous experience to double-check their options and preparedness prior or even after selecting an open source solution.

Similarly, once a product such as IBM Data Management Platform for EDB Postgres Enterprise is purchased, IBM offers their experience in the form of support. 80% of open source support issues are due to lack of product knowledge and environmental compatibilities.⁸ This may be because 57% turn to communities for open source support which often fall short in identifying infrastructure and interoperability issues, have slow response times, and a lack of real-time support.⁹ This provides a stark contrast with IBM Multivendor Support Services's (MVS) years of expertise. In a recent Total Economic Impact Study MVS was shown to reduce maintenance and support spending by 25%, lower time spent on hardware support by 20% and reduce time spent on vendor relationship management by 20%.¹⁰

Integration

Integration is vital for Hybrid Data Management environments so that businesses can increase efficiencies and drive down costs and wasted time. IBM provides three levels of integration across the various stages of implementation. Foremost, by purchasing open source databases from IBM alongside other hybrid data management technology, an experience that once would have required interaction with multiple vendors can be accomplished easily with one-stop shopping. This also allows the various technologies to be deployed together. IBM also provides one unified architecture for AI so that all data can be brought together in a hybrid environment for self-service analytics with integrated governance. Finally, support can also be delivered through a single source. IBM experts can be leveraged to speak to entire architectures that span multiple offerings whether they happen to be open source or not. Together, these factors provide a seamless environment with a strong vendor relationship.

Global Presence

As a global company, with a presence in over 130 countries and support for 127 languages,¹¹ IBM understands various geographic challenges and opportunities better than providers who limit themselves to a single market. The advice we share in consultations and support reflects that knowledge. In addition, having data centers around the globe can benefit customers in two key ways. First, locating data nearer to where it will be used reduces latency and helps provide insights more quickly. Second, some regulations require that data sits in the country of origin. This cannot be done with vendors absent in particular markets.

Learn more

To learn more about IBM Data Management Platform for EDB Postgres Enterprise schedule time with one of our IBM Experts for a free, 30-minute discussion. Or, visit our webpage: ibm.com/us-en/marketplace/postgres-enterprise.



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