

MARCH 2023

# Replicate from Oracle or PostgreSQL Databases to New Platforms with SharePlex by Quest

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**Abstract:** SharePlex by Quest is software that enables replication from Oracle and PostgreSQL databases to a variety of platforms to achieve high availability and increase scalability, integrated data, and reporting to support many business use cases.

## Business Challenges

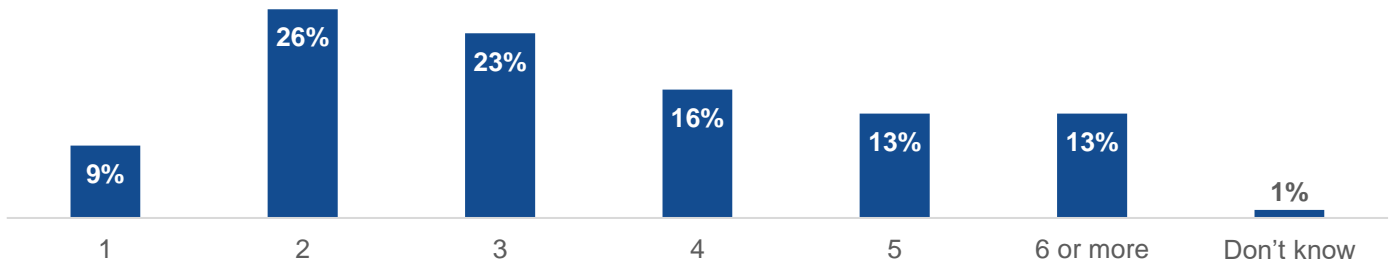
As organizations adopt modern platforms, they are introduced to a whole new set of challenges around business operations. There is constant pressure to drive down operational costs (including efforts by DBAs/staff, licensing costs, etc.) and implement new platforms to replace high-cost vendor databases, amplifying the need for interoperability between various systems. They must do all of this while also avoiding downtime and de-risking cross-platform migrations with the ability to ensure high availability and data recovery on open source databases to reduce costs.

## Multi-cloud Usage

TechTarget’s Enterprise Strategy Group asked research survey participants approximately how many unique public cloud infrastructure service providers their organizations currently use. As shown in Figure 1, 90% of the respondents use two or more cloud providers, with 64% using three or more.<sup>1</sup> Allowing organizations to continue using hybrid and multi-cloud databases is one of the challenges SharePlex addresses in firming up IT resilience and business continuity.

**Figure 1.** 90% of Organizations Report Using Two or More Clouds

Approximately how many unique public cloud infrastructure service providers does your organization currently use? (Percent of respondents, N=504)



Source: Enterprise Strategy Group, a division of TechTarget, Inc.

<sup>1</sup> Source: Enterprise Strategy Group Complete Survey Results, [2023 Technology Spending Intentions Survey](#), November 2022.

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## What is SharePlex?

SharePlex is database replication software that supports both homogeneous and heterogeneous environments for high availability, scalability, and interoperability between platforms. Organizations can move data from Oracle or PostgreSQL to other platforms, on-premises, or to the cloud to achieve various business goals. Some of the key features are shown in Figure 2:

- **Migrate and upgrade:** Organizations can maintain an accurate, real-time copy of production data to upgrade and migrate databases without risk. Source and target keep in sync until testing is complete.
- **Ensure availability:** Oracle and PostgreSQL active-active replication is available with conflict resolution for high availability and disaster recovery with horizontal scaling. Oracle and PostgreSQL bi-directional database replication with conflict resolution help de-risk migrations and support interoperability requirements.
- **Increase scalability:** Organizations can replicate data to unlimited targets to meet business needs.
- **Integrate data:** Data can be replicated and integrated in near-real time while ensuring data accuracy in flight.
- **Improve performance:** Reporting can be offloaded, and load balancing can be implemented to improve database performance.
- **Support analytics:** Data can be fed to other applications for real-time analytics and integrations. For example, data can be moved from PostgreSQL to Oracle, Snowflake, Kafka, Azure Event Hubs, SQL Server, and more.

Figure 2. SharePlex by Quest Key Solution Elements



Source: Quest

A few typical usage scenarios for SharePlex by Quest include:

- **Real-time data replication:** SharePlex can provide real-time replication of data in on-premises, hybrid cloud, or public cloud database architectures within or between geographical regions.
- **Active-active replication:** SharePlex performs active-active replications to support Oracle-to-PostgreSQL migrations.
- **Data integration and warehousing:** For organizations using other modern technologies, SharePlex provides data integration and warehousing.

## Replication from Oracle

Oracle database migrations and upgrades can be time-consuming, risky, and expensive. SharePlex completes database migration and upgrades projects with near-zero downtime and zero data loss, achieving operational goals without business impact. SharePlex can replicate from one Oracle database instance to another or to an entirely new platform and has been doing so for over 25 years. It uses various techniques to ensure that data is kept up to date and consistent across multiple servers.

SharePlex for Oracle has several key features, including:

- In-flight data integrity and instantiation.
- Compare-and-repair data.
- Migration fallback option.
- Replication monitor GUI.

Platforms supported include:

- **Oracle:** Migrate Oracle data to other Oracle environments, whether on-premises or in the cloud, across Oracle database editions, versions, or server operating systems.
- **SQL Server and Azure SQL Database:** Move Oracle data to SQL Server or Azure SQL Database to increase scalability and provide offload reporting and near real-time data integration.
- **Kafka:** Move Oracle data into Kafka to support streaming with high accuracy, low overhead, and fault tolerance.
- **Azure Event Hubs:** Utilize Azure analytics services such as Synapse Analytics by streaming Oracle data into Azure Event Hubs as a gateway into the Azure ecosystem.
- **MySQL:** Enable interoperability between Oracle and MySQL databases, with continuous replication for data integration.
- **PostgreSQL:** Enable interoperability between Oracle and PostgreSQL databases with bi-directional replication and increased conflict resolution.
- **Snowflake:** Replicate from Oracle to Snowflake to create data pipelines into the Snowflake Data Cloud.
- **JMS Message Queues:** Move Oracle data into a JMS queuing system to support data integration with accuracy.
- **File System Output:** Replicate Oracle data to written file systems in multiple formats, including JSON, XML, or SQL.

## Replication from PostgreSQL

SharePlex for PostgreSQL enables support of complex mission-critical database environments. Using SharePlex, PostgreSQL databases can be easily replicated to other PostgreSQL databases or new platforms.

Enterprise-grade PostgreSQL architectures can be created using active-active database replication to create resilient PostgreSQL clusters that can handle large amounts of data and enable high availability, disaster recovery, scalability, and instances across regions.

As organizations support more applications with PostgreSQL databases now, they must be able to support the same HA/DR and horizontal scaling problems that early Oracle users faced (and SharePlex was invented for) in the late 1990s. With SharePlex for PostgreSQL, organizations can address those use cases when replicating between PostgreSQL databases. PostgreSQL data can be unlocked by ensuring interoperability with other technologies, allowing organizations to innovate on the platforms that make sense for them.

SharePlex for PostgreSQL key features include:

- Active-active replication between PostgreSQL databases.
- Active-active replication between Oracle and PostgreSQL databases.
- Automatic repair of out-of-sync conditions with pre-defined or custom conflict resolution options.
- The replication of PostgreSQL changes to other targets, like Kafka and Snowflake, for real-time analytics and integrations.

Platforms supported include:

- **Oracle:** Migrate PostgreSQL data to Oracle environments, whether on-premises or in the cloud.
- **PostgreSQL:** Enable interoperability between PostgreSQL and other databases with continuous replication for offload reporting and data integration.
- **SQL Server:** Move PostgreSQL data to SQL Server to increase scalability and provide offload reporting and near-real-time data integration.
- **Kafka:** Move PostgreSQL data into Kafka to support streaming needs with high accuracy, low overhead, and fault tolerance.
- **Snowflake:** Replicate from PostgreSQL to Snowflake to create data pipelines into the Snowflake Data Cloud.
- **Azure Event Hubs:** Utilize Azure analytics services, such as Synapse Analytics, by streaming data into Azure Event Hubs as a gateway into the Azure ecosystem.

## Technical Validation

Overall, SharePlex is a robust and flexible solution for data replication. Enterprise Strategy Group also completed a Technical Validation of SharePlex and found that SharePlex by Quest can replicate and move data between homogeneous and heterogeneous environments with minimal downtime. Specifically, we validated that SharePlex can replicate data in the following scenarios:

- PostgreSQL to PostgreSQL unidirectional and active-active replication with and without conflict resolution.
- PostgreSQL to Microsoft SQL Server, including various partitioning schemes.
- PostgreSQL Oracle active-active replication with and without conflict resolution.
- Oracle to Snowflake, including various partitioning schemes.

## Conclusion

There are many reasons why an organization might choose to buy SharePlex by Quest, as discussed in this showcase. The ease of migration from Oracle or PostgreSQL to new platforms that support workflows is an essential consideration for any data-driven company working towards getting the correct data to business and consumer decision-makers as quickly as possible. This might mean addressing new data streams, which should reside in databases designed for this type of workload. Organizations need the flexibility offered by SharePlex to replicate data wherever it needs to be to support the business.

SharePlex offers flexibility, scalability, and performance with data protection, including high availability and disaster recovery. It can easily replicate data between different types of databases, including Oracle, SQL Server, and MySQL. It also supports both homogeneous and heterogeneous replication, which means it can replicate data between different versions and platforms of the same database or between other databases. For scale, SharePlex allows for data replication across multiple servers, which can be used to scale out read-heavy workloads. And for

performance, SharePlex uses various techniques, such as log-based replication and parallel replication, to ensure that data is replicated quickly and efficiently.

Enterprise Strategy Group believes that SharePlex by Quest offers organizations the flexibility to replicate and move data between both traditional and modern data platforms to create flexible data architectures. If your organization wants to leverage this flexibility, we suggest you take a closer look at SharePlex by Quest.

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