

TRANSPARENT DATA ENCRYPTION

Document version: 1.1
Last change: 2025-01-07

TABLE OF CONTENTS

TRANSPARENT DATA ENCRYPTION FOR POSTGRESQL WITH CYBERTEC	
PGEE.....	3
DO THESE CHALLENGES SOUND FAMILIAR?.....	3
GET TO KNOW TDE FROM CYBERTEC.....	3
VERSION HISTORY.....	5

TRANSPARENT DATA ENCRYPTION FOR POSTGRESQL WITH CYBERTEC PGEE

Keep your data safe and meet your compliance requirements, while maintaining fast database performance, with the data-at-rest encryption solution from the original creators of TDE for PostgreSQL.



DO THESE CHALLENGES SOUND FAMILIAR?

1. You're being asked to comply with various security rules. Part of the requirement is data-at-rest encryption, which brings more complexity than other areas. You need a simple solution.
2. You're using filesystem encryption, but have been advised it isn't sufficient to meet your security and compliance requirements, because it leaves a number of attack vectors open. You need a way of shutting these down.
3. You're using TDE with other database technologies. As part of your move to PostgreSQL, you need to ensure you're using TDE in PostgreSQL too.

GET TO KNOW TDE FROM CYBERTEC

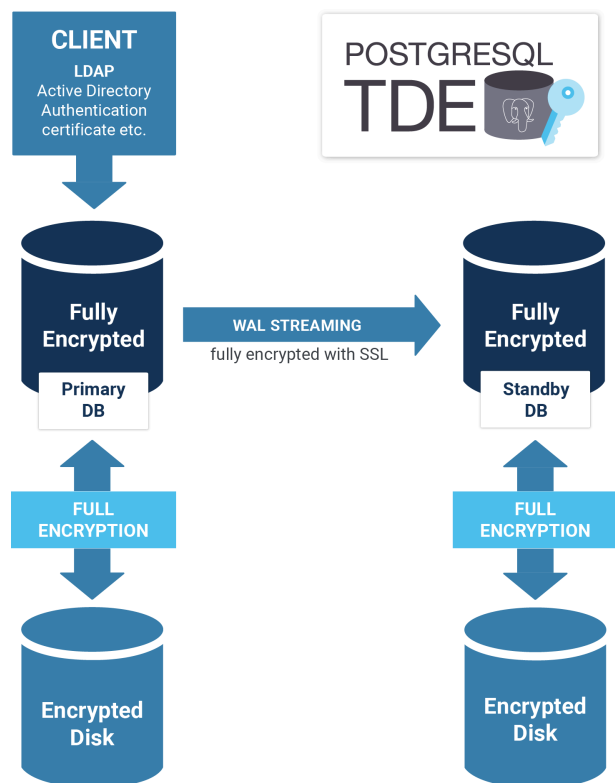
INDUSTRY-STANDARD SERVER-LEVEL ENCRYPTION

Keep your data safe with industry-standard 128-bit AES encryption at the server level.

COMBINE STRONG SECURITY WITH QUICK PERFORMANCE

CYBERTEC PGEE TDE combines strong security with fast performance. Thanks to its use of hardware acceleration and highly efficient encryption/decryption, you can enjoy exceptionally fast speeds.

In most cases, any change in workload performance will be negligible.

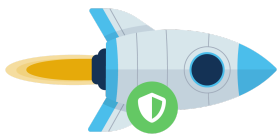




GO BEYOND FILESYSTEM ENCRYPTION AND TDE EXTENSIONS

While filesystem encryption and extension-based TDE solutions offer some protection, they don't offer a comprehensive data-at-rest encryption solution.

CYBERTEC PGEE TDE goes further, offering complete server-level encryption that will enable you to meet your security and compliance requirements. This includes encryption of transaction logs, replica databases, and the replication process.



COMBINE STRONG SECURITY WITH QUICK PERFORMANCE

CYBERTEC PGEE TDE combines strong security with fast performance. Thanks to its use of hardware acceleration and highly efficient encryption/decryption, you can enjoy exceptionally fast speeds. In most cases, any change in workload performance will be negligible.



NO APPLICATION CODE CHANGES

Switching your applications to work with a TDE-encrypted database requires no code alterations, the SQL side is completely transparent.



KMS AND KEY-ROTATION SUPPORT

Like regular password changes, frequent database encryption keyset rotation is essential for maintaining good security and compliance. CYBERTEC PGEE TDE integrates with specialist key management systems (KMS) and supports key-rotation as standard, via the built-in encryption proxy.

Key changes require close-to-zero downtime and are non-destructive.



HIGH-AVAILABILITY

Deploy highly available PostgreSQL environments, with all components securely encrypted.



FLEXIBLE WAYS TO DEPLOY

Deploy highly available PostgreSQL environments, with all components securely encrypted.

GET TO KNOW TDE FROM CYBERTEC

CYBERTEC built the original implementation of TDE for PostgreSQL, and our TDE technology is widely regarded as market-leading. We literally know TDE for PostgreSQL inside out –, because we created it.

Building on this heritage, we continue to develop and refine CYBERTEC PGEE TDE, so that you're benefiting from the most advanced and complete PostgreSQL data-at-rest encryption solution on the market.



VERSION HISTORY

Version	Effective Date	Description	Author	Reviewed By	Approved By
1.0	2025-01-07	Finishing writing and laying out the document	Hans-Jürgen Schöning	Patricia Horvath	Cornelia Biacsics

If you need further information

For more information, or if you have any questions about our range of products, tools and services, contact us. There's no obligation—send us an inquiry via email or give us a call.



Contact

-  **CYBERTEC PostgreSQL International GmbH**
Römerstraße 19
2752 Wöllersdorf
AUSTRIA
-  + 43 (0) 2622 93022-0
-  sales@cybertec-postgresql.com