The Power of Postgres
Extreme High Availability:
3 Must-Read Success Stories

POWER TO POSTGRES

Extreme High Availability: A Database Essential

As Postgres cements itself as the most loved and most wanted open source database management system (DBMS) among innovators, more and more businesses are investing in this dynamic and transformative solution. Abandoning the restrictions and limitations of proprietary commercial databases—including unpredictable pricing and frustrating licensing agreements—these enterprises demand a DBMS that will provide them full control over their data, wherever, whenever and however they need to leverage it.

Postgres high availability is a critical facet of this.

In EDB's experience talking to customers about the benefits of Postgres, extreme high availability has come up time and time again as one of the key drivers for migration and infrastructure modernization: the promise of a database that will provide consistent uptime and offer 24/7 access to their most valuable assets and mission-critical applications. As data volumes expand and user expectations rise, enterprises who cannot offer an "Always On" database will struggle to innovate, retain customers and talent and cement their place in the market.

3 Must-Read Success Stories

This guide is designed not only to demonstrate the undeniable importance of high availability in databases, but to explore how Postgres guarantees that and how businesses can continually augment their Postgres database's reliability.

Here is the full potential of Postgres extreme high availability, told by three enterprises who have witnessed it firsthand.

1

telegra

EDB provides high availability and takes a mission-critical telecommunications database to the next level, reducing downtime and freeing up resources.

2

ClickUp

EDB ensures consistent uptime for a global project management software provider, building and solidifying customer satisfaction

3

ACI Worldwide

EDB helps a leading payment solution provider enhance their platform, reduce costs and guarantee availability for a rapidly growing customer base

telegra

telegra implements EDB Postgres Distributed to provide high availability for its mission-critical Postgres databases

20
YEARS OF EXPERIENCE

30
MILLION CALLS

90
MILLION MINUTES OF CALL TIME A MONTH

Key Takeaways

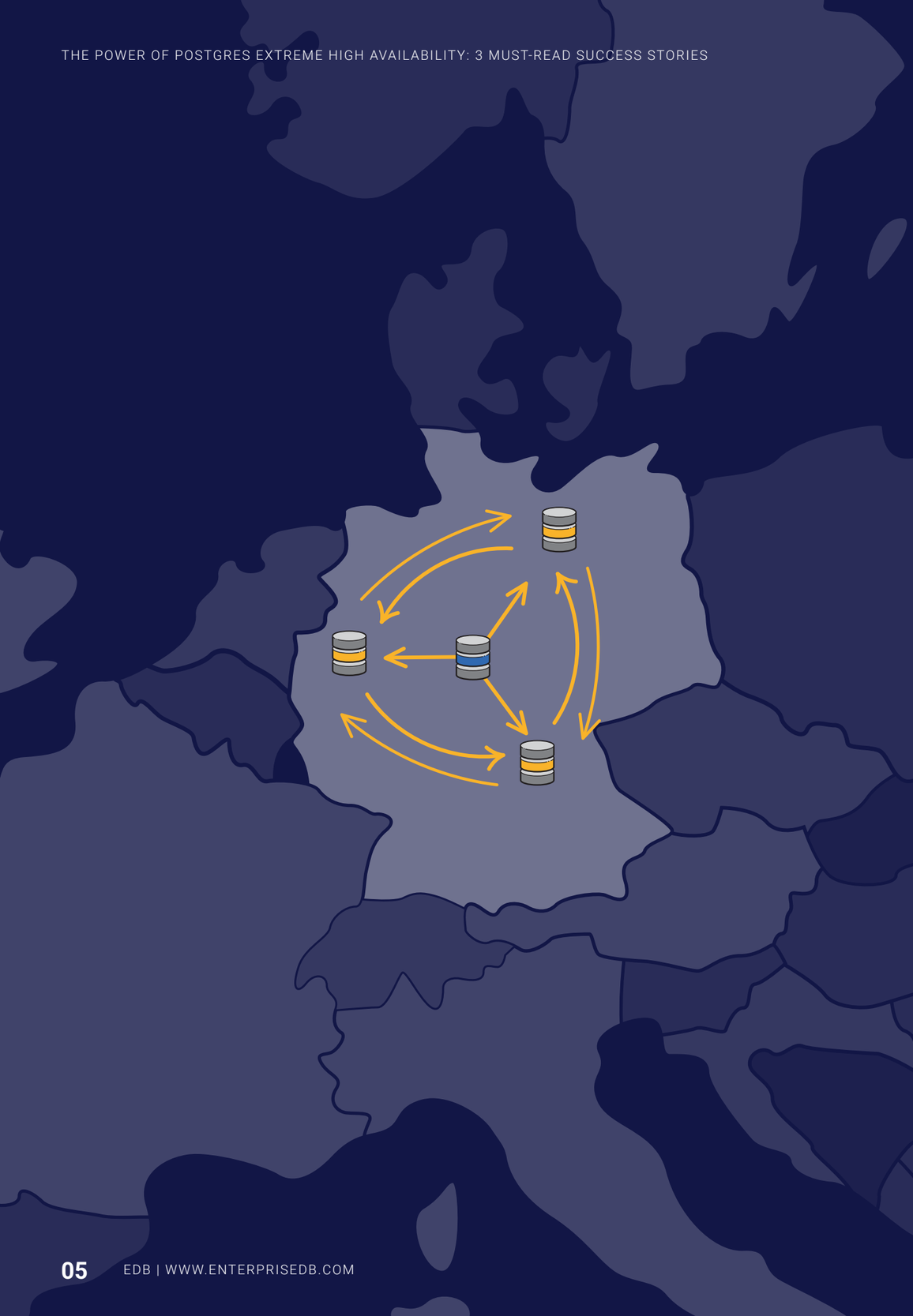
- Synchronized data centers with no major downtime with EPAS and EDB Postgres Distributed
- Leveraged EDB Postgres Distributed as a contingency plan for any potential failure or “network split-brain” scenario
- Reinvested the freed-up support time in customer-centric application innovation

Products

- EDB Postgres Advanced Server (EPAS)
- EDB Postgres Distributed

Industry

- Telecommunications



About telegra

telegra is a next-generation telecoms provider with over 20 years of experience as a telephone network operator and telecoms application developer. Headquartered in Germany, telegra's business is rapidly expanding across Europe and handles 30 million calls and 90 million minutes of call time a month. One of telegra's successful products is a web-based automatic call distribution (ACD) solution for call centers. The ACD offering enables organizations to centralize their entire telecommunication in telegra's cloud and manage it through an integrated web-based interface.

Challenge: Providing 24/7 IT availability and round-the-clock support

The arrival of services over the internet and the consumerization of IT have significantly changed the dynamics of the telecoms market and the expectations of customers for "Always On" connectivity. As a carrier, telegra's customers expect services to be available 24/7 with no downtime. The pandemic further emphasized the importance of reliability, availability, and scalability, as telegra's call center customers had to send their agents home to work remotely during various lockdowns. As a result of widespread home working, telegra experienced a significant increase in customer adoption, with the new customers looking for out-of-the-box solutions that support remote working.

While telegra's VoIP-infrastructure always had a primary-primary data center model, the web applications, however, used a binary primary-failover data center model, which did not allow them to respond quickly enough to changing customer demand and ensure 24/7 availability at the same time. As a result, in 2018, telegra began the process of redesigning its IT infrastructure for more agile service development. This redesign involved moving away from traditional databases, such as Oracle, and adopting an open source approach in their two data centers in Germany.

Solution: EDB Postgres Advanced Server and EDB Postgres Distributed

telegra adopted EDB Postgres Advanced Server (EPAS) with EDB Postgres Distributed across both its new Dusseldorf and Cologne data centers, which has enabled the company to switch from a primary-failover to a primary-primary setup EDB Postgres Distributed synchronizes data configuration, routing plans and call detail records, which has helped telegra keep its customer data highly available and synchronized at all times.

These solutions, combined with EDB's deep Postgres experience and 24/7 support, ensured that telegra could achieve true extreme high availability.

“Although Postgres is easy to use, it is always reassuring to have someone in the background with expertise to fix any potential challenges, especially as it is now our main database. EDB has always been very responsive if there were any issues. This has given telegra the confidence and peace of mind that it can support the business”

Christian Blaesing, Head of IT

Result: Zero downtime and full synchronization across data centers

Since adopting EPAS and EDB Postgres Distributed, the telegra team has experienced no major downtime, while also increasing the time available to build improvements into their software applications. On top of this, they’ve managed to reduce database complexity, increase security and cut their licensing costs.

Thanks to EDB Postgres Distributed, both of their data centers are perpetually synchronized, with advanced failover mechanisms that can prevent unnecessary downtimes and network “split-brain” scenarios. With all of these essential requirements handled via EDB, telegra can now dedicate their time and resources to customer-centric application innovation.

ClickUp uses EDB Postgres Distributed to achieve consistent performance globally

Key Takeaways

- Provided consistent performance for customers who rely on ClickUp's solution as a key part of their workflows with the help of EDB Postgres Distributed
- Ensured said performance during PostgreSQL and Postgres Distributed updates
- Effectively managed massive data volumes across 7 nodes while maintaining 99.999% uptime for 12 months

Products

- **EDB Postgres Distributed**
- EDB Support

Industry

- Project Management Software

About ClickUp

ClickUp is a SaaS project management and collaboration software that makes the world more productive with its intuitive design. ClickUp's customers range from individuals and small businesses to large corporations such as Apple, Nike, Uber, Google and AirBnB. The platform helps users manage tasks, documents, conversations, and timelines all in one place. With over 100,000 teams worldwide, ClickUp is the fastest growing productivity software due to its unique, customizable user experience and cutting-edge features.

Challenge: Providing consistent global availability that customers demand

ClickUp has been using PostgreSQL as the backbone of their systems since their inception. The platform attracted users at a global scale, creating an incredible and unexpected growth. Due to scaling needs, ClickUp identified a geographically distributed cluster with distributed PostgreSQL databases as the best solution.

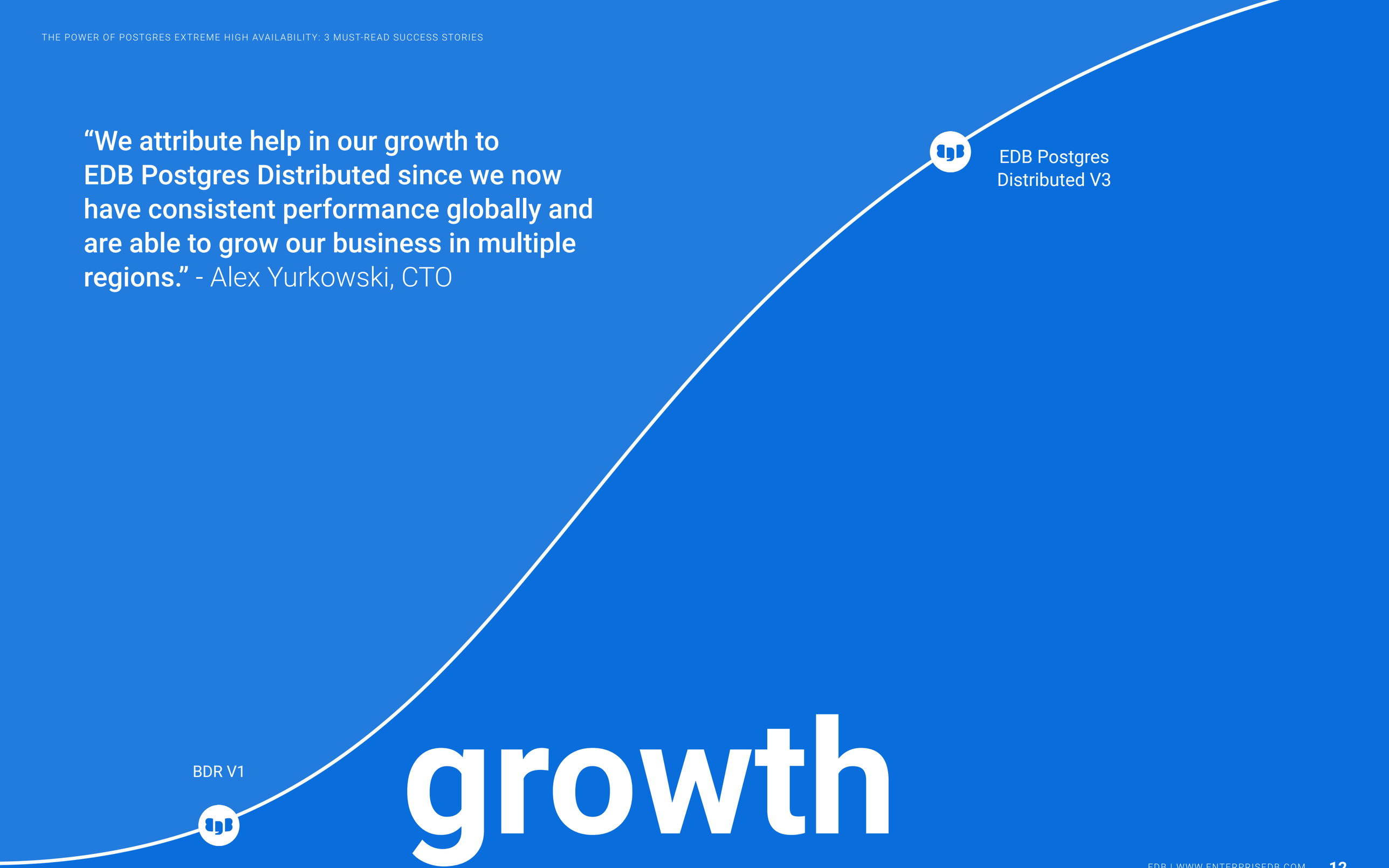
While engineers were spending several hours daily optimizing the system, the ClickUp team began looking for a Multi-Master solution to overcome the performance issues faced by their customers. ClickUp identified BDR v1 for their geographically distributed needs, as it was "the only real multi-master solution for Postgres databases," says Alex Yurkowski, CTO of ClickUp.

As ClickUp continued to grow, the complexity of their application's scalability and performance requirements increased. Exhausted with their internal efforts and resources, it became clear that they were hitting the limits of performance and scalability in BDR v1. ClickUp's tech team approached EDB for a solution. After a thorough analysis, the EDB team recommended ClickUp move to **EDB Postgres Distributed** v3 for solving the performance and scalability issues they faced on the older version of the tool.

Solution: Achieve a mission-critical upgrade while maintaining optimal performance and peak uptime

EDB's team of PostgreSQL experts helped ClickUp upgrade to EDB Postgres Distributed v3 within the planned downtime. Using industry best practices and ClickUp's business requirements, the cluster was optimally configured using EDB Postgres Distributed. This allowed ClickUp to scale their system for exponential growth while delivering peak performance to their customers.

“We attribute help in our growth to EDB Postgres Distributed since we now have consistent performance globally and are able to grow our business in multiple regions.” - Alex Yurkowski, CTO



Result: Uninterrupted uptime and high availability across a global network

ClickUp's current cluster holds 300 GBs of data which is distributed over 7 nodes. The present configuration, with multiple Master nodes, has allowed them to set up high availability across some regions while remaining regions transition incrementally. This attributed to the platform's 99.999% uptime for a consecutive 12 months.

Acknowledging the importance of having PostgreSQL experts available around the clock, ClickUp also subscribed to EDB'S 24/7 Support.

"EDB's support has helped us to upgrade our PostgreSQL and Bi-Directional Replication version with zero downtime to ensure we are getting the best performance out of our database cluster." - Alex Yurkowski, CTO

ACI Worldwide
Real-Time Payments

ACI Worldwide modernizes software architecture while reducing risk and lowering costs with Postgres

19 OUT OF 20 OF THE WORLD'S TOP BANKS

$14 TRILLION

IN PAYMENTS AND TRANSACTIONS EVERY DAY

Key Takeaways

- Achieved optimal database and application performance with the help of EDB Postgres Distributed
- Drastically reduced costs and eliminated licensing restrictions
- Built the ideal database architecture for their business and customer needs through EDB's Postgres expertise and guidance

Products

EDB Postgres Distributed

Industry

FinTech, Payment Platforms

About telegra

ACI Worldwide is a global software company that provides mission-critical real-time payment solutions to corporations. Customers use the company's proven, scalable, and secure solutions to process and manage digital payments, enable omni-commerce payments, process bill payments and manage fraud and risk.

Challenge: Build a better, more dynamic database without overspending

Boasting 19 out of the world's top 20 banks and thousands of merchants as customers, ACI Worldwide processes more than $14 trillion in payments and securities transactions every day. That intense volume of real-time transactions comes with many technical requirements and associated costs.

> **"Given the financial nature of the transactions we process, we not only need multiple data centers for redundancy, we need those data centers to be fully synchronized in real time,"** - Jack Bloch, Senior Vice President of Software Engineering at ACI Worldwide.

While ACI's legacy databases could technically support those requirements, it did so through a combination of add-ons that added both technical complexity and cost.

As such, ACI Worldwide embarked on a multi-year modernization effort, part of which involved a reevaluation of its database investments.
The goal of this was three-fold:

1. Identify a strong technical partner responsive to ACI's evolving requirements.
2. Eliminate the architectural compromises often dictated by proprietary databases without sacrificing functionality needed by ACI's real-time solutions.
3. Reduce and simplify database licensing costs.

> "While a couple other databases also offered the functionality we were looking for, they did so using multiple, often overlapping products. EDB Postgres Distributed provided what we needed in a single lower-cost solution—without any additional add-ons. PostgreSQL is a workhorse. Our performance is great, and it's philosophically well aligned with our worldview." - Jack Bloch

Solution: Harness the full power and cost-effectiveness of PostgreSQL with the help of EDB

Since the new database would become a critical component of ACI's entire solutions portfolio, the team conducted an extensive five-month evaluation of multiple relational database options, both open source and proprietary, to ensure the company selected the best partner for its long-term needs.

After eliminating databases that couldn't meet ACI's exacting standards, the team evaluated the remaining options based on their suitability as a long-term partner: responsiveness, resilience in architecture, willingness to collaborate, and flexibility in both architecture and organization.

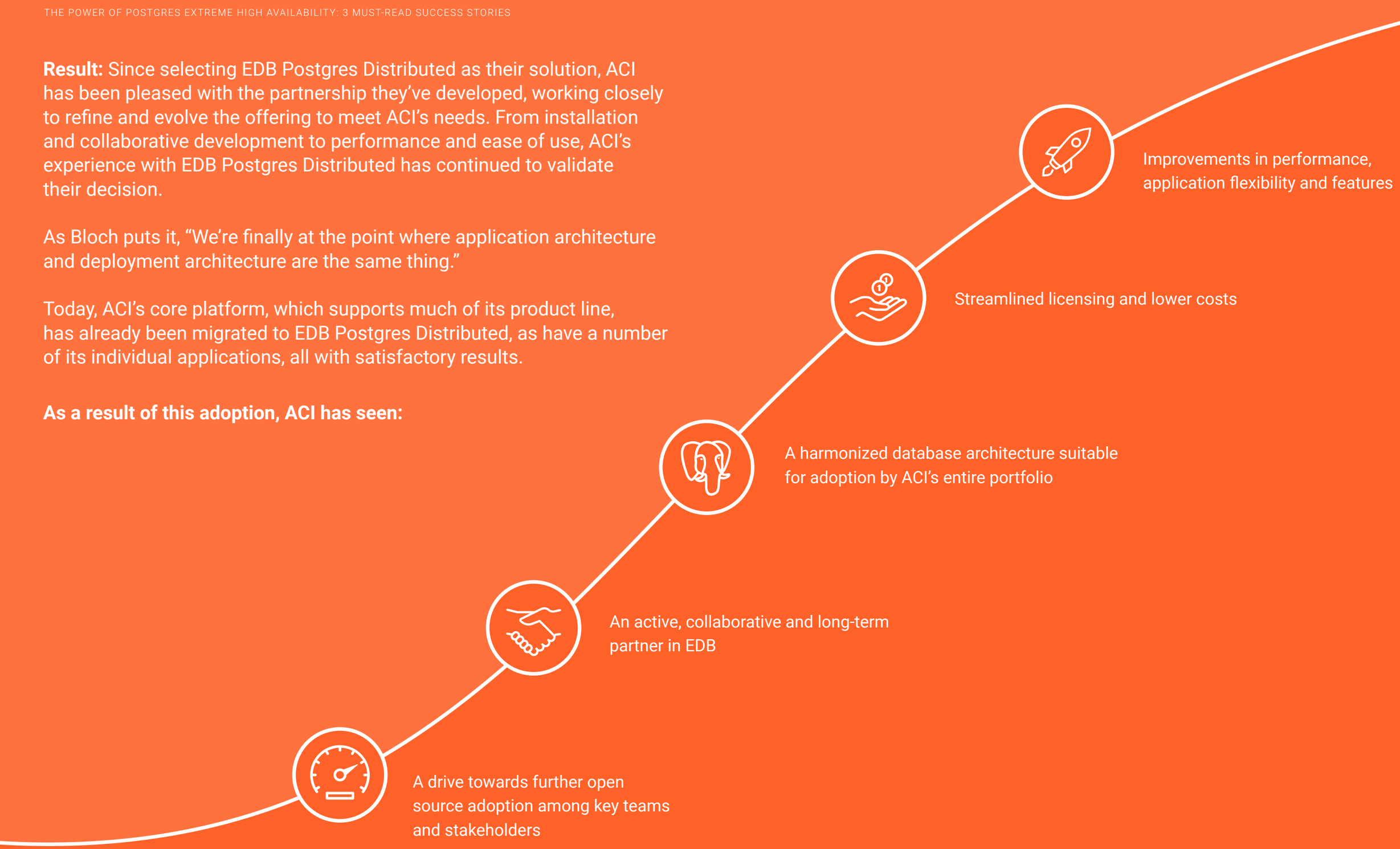
Bloch explains that philosophical preference further: "In today's technological and business environment, you never know what can happen to a business. Open source technology provides us with more options and some insurance against uncertainties."

Result: Since selecting EDB Postgres Distributed as their solution, ACI has been pleased with the partnership they've developed, working closely to refine and evolve the offering to meet ACI's needs. From installation and collaborative development to performance and ease of use, ACI's experience with EDB Postgres Distributed has continued to validate their decision.

As Bloch puts it, "We're finally at the point where application architecture and deployment architecture are the same thing."

Today, ACI's core platform, which supports much of its product line, has already been migrated to EDB Postgres Distributed, as have a number of its individual applications, all with satisfactory results.

As a result of this adoption, ACI has seen:



Harness the Power of Postgres Extreme High Availability

With the help of EDB, enterprises across industries and around the world have seen the full potential of Postgres first-hand, bolstered by our own solutions that help take that potential to the next level, ACI Worldwide, ClickUp and telegra are only a few of the companies that have seized the power of highly available Postgres

Want to join the innovators and experience the power of extreme high availability?

Contact EDB today

www.enterprisedb.com/contact

About EDB

EDB provides enterprise-class software and services that enable businesses and governments to harness the full power of Postgres, the world's leading open source database. With offices worldwide, EDB serves more than 1,500 customers, including leading financial services, government, media and communications and information technology organizations. As one of the leading contributors to the vibrant and fast-growing Postgres community, EDB is committed to driving technology innovation. With deep database expertise, EDB ensures extreme high availability, reliability, security, 24x7 global support and advanced professional services, both on premises and in the cloud. This empowers enterprises to control risk, manage costs and scale efficiently. For more information, visit www.enterprisedb.com.

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