



Azure Database for PostgreSQL paves the way from migration to AI innovation

Real-world success stories of PostgreSQL on Azure



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Get started with Azure Database for PostgreSQL today!

A data foundation designed for every stage of growth

From healthcare to financial services to tech startups, organizations are discovering the value of a database that meets them where they are and sets them up for growth. This ebook explores that journey through the lens of real customers. Read on to learn how Apollo Hospitals, Nasdaq, SubgenAI, August AI, and OpenAI each progressed at their own pace using Azure Database for PostgreSQL to evolve their data foundation and unlock new AI capabilities.

Most organizations don't leap into cloud migrations or AI-powered systems overnight. They move in deliberate stages: first establishing a reliable foundation, then optimizing for performance, and finally accelerating innovation. This progression exists in companies of every size and across every industry. And many of them are navigating their journey successfully thanks to [Azure Database for PostgreSQL](#).

Whether you're beginning to migrate on-premises systems, scaling mission-critical workloads, or building next-generation AI applications, Azure Database for PostgreSQL provides a fully managed, enterprise-ready, AI-powered PostgreSQL environment with 58 percent lower total cost of ownership (TCO)¹ compared to on-premises deployments. Because it's built on the Azure ecosystem, it offers the integrated security, global reach, and extensibility organizations need to move forward with confidence.

Source:

¹[The Economic Benefits of Migrating On-premises Databases to Azure Database for PostgreSQL](#),
March 2025

The stories shared in this ebook are living proof that Azure Database for PostgreSQL paves the way for companies to:



Migrate with confidence

Reduce operational burden, strengthen security and compliance, and move workloads without disrupting the business.



Modernize for scale

Improve performance, availability, and cost efficiency with intelligent tuning, elastic scaling, and enterprise-grade resiliency.



Build intelligent applications and agents

Use vector search, semantic ranking, AI model management, and graph capabilities—alongside operational data—to power smarter, faster decision-making.

A PostgreSQL platform trusted across industries



Manufacturing and automotive

[BMW Group relies on Azure Database for PostgreSQL](#) to support cloud-native applications at scale, enabling faster development cycles across its global services.



Retail and e-commerce

[Ahold Delhaize uses Azure Database for PostgreSQL](#) to power highly available, scalable retail applications, helping teams manage large volumes of operational data.



Professional services

[Mott MacDonald powers its AI agent with Azure Database for PostgreSQL](#), accelerating onboarding and spreading best practices to its 220,000 employees.



MIGRATE WITH CONFIDENCE

Apollo Hospitals achieves 99.95% uptime after migrating to Azure

Apollo Hospitals needed a more scalable, flexible, and maintainable database foundation to support digital care delivery across its network of more than 74 hospitals. Its legacy on-premises Oracle system had become difficult to manage and couldn't keep pace with growing data volumes and performance expectations, leaving IT teams stuck in maintenance instead of innovation.

Adopting a flexible architecture

Apollo migrated its core hospital information system backend to Azure Database for PostgreSQL. Working with partner Quadrant Technologies, the team lifted and shifted critical applications while using Azure DevOps to orchestrate CI/CD pipelines and ensure deployment continuity. Apollo also integrated telemetry and visibility tools like Azure Application Insights.

Delivering the next generation of care

The migration to Azure Database for PostgreSQL and Azure delivered significant operational improvements and laid the groundwork for future innovation. With a stable, scalable PostgreSQL backend, Apollo has strengthened reliability and is now exploring real-time analytics and AI-enabled tools like Microsoft 365 Copilot.

- Achieved 99.95% availability across hospital systems
- Accelerated transactions to execute within 5 seconds
- Reduced deployment times by 40% with modern CI/CD pipelines
- Decreased operational overhead

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We saw Azure Database for PostgreSQL as the right foundation for the future. It's open, cost-effective, and capable of supporting the hospital information system we built in-house.

Shankar Krishna A.
General Manager of IT
Apollo Hospitals





MIGRATE WITH CONFIDENCE

August AI scales its AI companion to improve the patient experience

August AI, a healthcare-tech startup, provides patients with constant access to accurate medical information and analysis through its AI companion named August. As the startup projected a surge in user adoption, the team also realized their existing IT infrastructure would not be able to keep up with the anticipated growth.

Prescribing cloud scalability to drive growth

August AI migrated its entire technology stack to Azure, building a new cloud architecture that supports large language models, handles exponential data growth, and meets strict compliance requirements such as HIPAA. A key component of this new architecture was Azure Database on PostgreSQL, which stores mission-critical patient data and scales storage as usage expands. With Azure Database on PostgreSQL, the team could quickly optimize query performance and manage complex workloads.

Achieving a healthier data foundation

Migrating to Azure Database on PostgreSQL, alongside additional Azure services, allowed August AI to expand its reach, strengthen security, and improve performance at scale.

- Scaled August to 3.5M+ users worldwide, up from roughly 500,000
- Achieved zero downtime during Azure migration
- Completed migration in three months
- Freed up time for innovation thanks to a fully managed database service

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We receive a log of queries that are not performing optimally, and within a couple of minutes we can optimize that query with PostgreSQL on Azure and move on.

Anuruddh Mishra
Founder and CEO
August AI

august





MODERNIZE AT SCALE

Nasdaq modernizes boardroom app to reduce prep times

Nasdaq, a global leader in market infrastructure, wanted to modernize its Nasdaq Boardvantage platform to make it easier for directors and administrators to prepare for and collaborate during board meetings. Instead of reviewing hundred-page board books, directors needed an application that reduced manual efforts and still delivered insights.

Laying the foundation of flexibility and security

Nasdaq re-architected Nasdaq Boardvantage on Azure. It containerized services with Azure Kubernetes Service (AKS) and adopted Azure Database for PostgreSQL alongside Azure Database for MySQL as the foundation for persistent governance data. This provided the flexibility, performance, and security needed to support a modern, multitenant platform. With this foundation in place, Nasdaq integrated Microsoft Foundry and Azure OpenAI to deliver intelligent summarization and workflow automation.

Integrating AI and automating workflows

With a modernized, scalable data foundation, Nasdaq is now extending AI capabilities across its platform, enabling richer insights and more streamlined decision-making for boards and administrators.

- Saved 60% of reading time with AI-powered document summarization
- Reduced administrative preparation time by 25% across board workflows
- Achieved up to 97% accuracy in AI-generated summaries and meeting minutes
- Established a reusable AI framework

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Both Azure Database for PostgreSQL and Azure Database for MySQL gave us the right balance of performance, security, and control. The governance workloads we handle are unique, so we needed something that could meet those isolation and encryption requirements.

Scott Ellison
Vice President of Technology
Nasdaq





BUILD INTELLIGENT APPLICATIONS AND AGENTS

Subgen AI enables customers to make AI agents in 15 minutes

SubgenAI, a European generative AI company, saw an opportunity to help enterprise AI projects reach production. Enterprise-wide AI agent deployments often face time-consuming iteration cycles, a lack of observability and cost control, security concerns, and data sovereignty requirements. SubgenAI built its flagship platform, Serenity Star, to address these issues.

Simplifying complex AI agent development

Serenity Star transforms AI agent development from a code-heavy, fragmented process into a streamlined, no-code experience. Built on Azure Database for PostgreSQL and Microsoft Foundry, Serenity Star handles the entire AI agent lifecycle while providing enterprise-grade security and compliance features. Users can focus on defining their agent's purpose and behavior rather than wrestling with technical implementation details.

The knowledge component of AI agents relies heavily on retrieval-augmented generation (RAG) systems that perform similarity searches against embedded content. This requires a database capable of handling efficient vector search while maintaining enterprise-grade reliability and security. After evaluating several database options, SubgenAI chose Azure Database PostgreSQL with pgvector for its accurate and scalable vector search.

Cutting coding time by half

With a unified, scalable data foundation for vector search, RAG workflows, and secure operations, organizations can now deploy intelligent agents rapidly and confidently. Subgen AI customers can:

- Launch AI agents in as little as 15 minutes
- Cut coding and development time by 50%
- Resolve most AI agent queries in under 60 seconds
- Lower operational complexity



[Read the full story](#)

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With Microsoft and Azure Database for PostgreSQL we have total control and an environment that is truly dynamic and can adapt to the evolution we're looking for.

Julia Schröder Langhaeuser

VP of Product Serenity Star
SubgenAI





BUILD INTELLIGENT APPLICATIONS AND AGENTS— AT SCALE

OpenAI scales PostgreSQL for one of the world's most demanding AI platforms

OpenAI operates some of the most widely used AI services in the world, including ChatGPT. At the core of many of OpenAI's production systems is PostgreSQL, which supports mission-critical workloads and remains available even under massive, unpredictable demand. As usage grew, OpenAI needed a PostgreSQL environment that could scale reliably without disrupting core services. OpenAI has long operated PostgreSQL on Azure, initially using a single primary instance without sharding. This architecture worked well until write scalability limits posed a challenge.

Building a resilient foundation on Azure

With Azure Database for PostgreSQL, OpenAI had the flexibility to optimize performance. First, the team tackled write bottlenecks by offloading write-heavy work to other systems where possible. And second, they optimized read-heavy workloads, using PgBouncer for connection pooling. Learning from OpenAI's workload evolution, the Azure Database for PostgreSQL team developed the elastic clusters feature, which allows OpenAI to scale horizontally through row-based and schema-based sharding.

Optimizing for scale, efficiency, and availability

OpenAI's PostgreSQL setup is handling a workload that few companies have ever seen, and yet, it's doing so on a foundation of open-source technology and cloud services that any startup can use. This kind of scale was once thought to require exotic databases or enormous engineering teams, but OpenAI achieved it with a small team focused on systematic, pragmatic optimizations.

- Reduced primary load by migrating write-heavy workloads to other systems
- Scaled reads horizontally using multiple read replicas
- Improved reliability by prioritizing critical requests
- Reduced connection latency from ~50 ms to under 5 ms

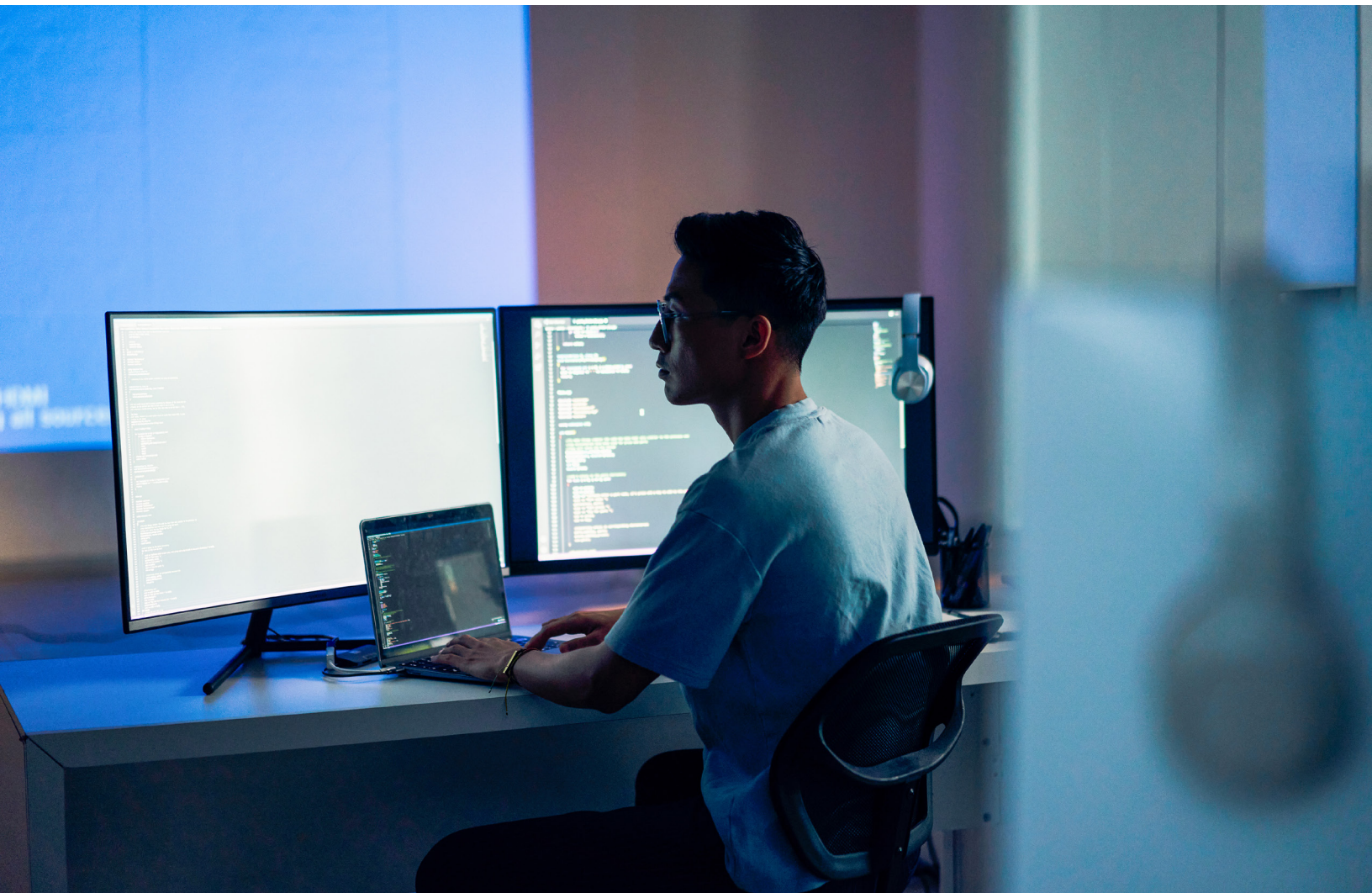
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After all the optimization we did, we are super happy with Postgres right now for our read-heavy workloads. It's really scalable and reliable.

Bohan Zhang

Member of the Technical Staff
OpenAI



Azure Database for PostgreSQL meets you where you are

Azure Database for PostgreSQL supports organizations at every stage of their journey. From migrating existing workloads, to modernizing for scale, to building intelligent applications and agents, this fully managed, AI-powered database delivers what you need when you need it. With a unified data foundation and AI-ready capabilities, it adapts as your organization evolves.



Migrate with confidence

- Managed infrastructure, automated backups, and patching
- Enterprise security, compliance, and observability
- No application code changes needed to migrate



Modernize for scale

- Independent compute and storage scaling
- 99.99% availability with automatic failover and SLA
- Intelligent performance recommendations and monitoring to optimize workloads



Build intelligent apps and agents

- Native vector search and high-performance DiskANN indexing
- Semantic operators and AI model management
- Integrated graph capabilities for relationship reasoning

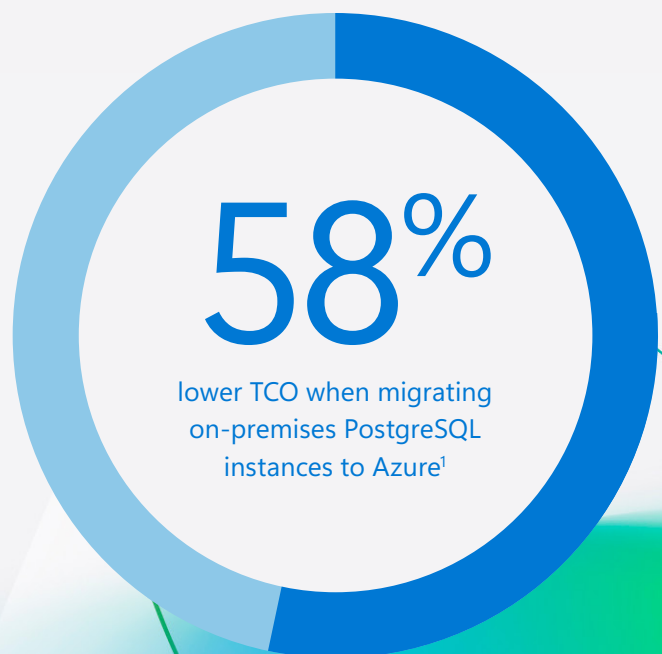
Invest in a foundation that keeps delivering value

As organizations advance toward AI-ready architectures, Azure Database for PostgreSQL provides lasting, compounding value. Its fully managed, open-source design reduces the cost and complexity of running enterprise-grade PostgreSQL. With simple, predictable pricing and built-in cost optimization, Azure Database for PostgreSQL helps IT leaders stretch budgets further while still delivering high performance, high availability, and global reach. You can scale up, down, or across as needs change, adopting new capabilities like vector search or semantic ranking when you're ready. For developers, Azure Database for PostgreSQL reduces friction across the build cycle with automated operations and flexible scaling, making it easier to move from prototype to production with confidence.

And because Azure Database for PostgreSQL is integrated with Azure security and compliance, it's a platform you can trust as regulations tighten and data governance requirements grow. Plus, its developer tooling, including the PostgreSQL extension for Visual Studio Code with GitHub Copilot, accelerates productivity and lowers the operational overhead of maintaining data-intensive applications over time.

Azure Database for PostgreSQL is a smart long-term investment

- **Lower TCO** with stop/start instances, burstable compute, reserved capacity, and Advisor-driven optimization recommendations
- **Future-proof innovation** with full open-source compatibility, in-place upgrades, and Microsoft leadership in PostgreSQL core contributions
- **Enterprise trust and global scale** backed by industry-leading compliance certifications, integrated security, and availability across more than 60 regions
- **Developer velocity** powered by seamless framework integrations, end-to-end deployment tools, and AI-assisted development in the PostgreSQL extension for VS Code



Source:

¹[The Economic Benefits of Migrating On-premises Databases to Azure Database for PostgreSQL](#), March 2025

Get started with Azure Database for PostgreSQL today!

Whether you're ready to migrate your first workload, start a proof of concept, or build intelligent agents, Azure Database for PostgreSQL provides the data foundation to make it happen.

Start small, scale confidently, and innovate with AI

- [Learn more about Azure Database for PostgreSQL](#)
- [Read documentation and deployment guides](#)
- [Start with a free Azure account](#)
- [Check out blogs, updates, and best practices](#)