

Welcome





EDB

Postgres for the AI Generation

EDB Postgres[®] AI

Unified solution for transactional,
analytical, and AI workloads

Vibhor Kumar,
VP, CX Technical Advisor
04/08/2025

Executive Lunch - Postgres Roadmap in Madrid

13:00-16:00

8 de abril de 2025

Palacio de los Duques Gran Meliá, Cuesta de Sto. Domingo, 5, Centro, 28013 Madrid



Agenda

13:00 Copa de bienvenida

13:40 Almuerzo

14:40 Introducción

14:50 Presentación

- Hybrid Sovereign Data Platform: Cómo evoluciona la plataforma para responder a las necesidades de Seguridad y Escalabilidad
- AI and Vectorization: Qué papel juega Postgres a la hora de desplegar aplicaciones AI
- Customer Story: Postgres como habilitador de transformación en la mayor Paytech de Europa

15:30 Discusión, café, té y networking

16:00 Clausura



What is the job of EDB ?




1. Free Education





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2. Free Knowledge Transfer





NESTLE-EDB-SHARED-WBS



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Share



A1



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	
1			Andrea	Davide	Barbara	Oliver	TBD	Puja	Various	Sophie										
2			AE	SE	CSM	TAM	TRN	PM	CNS	MKG	N1	N2	N3	N...	W1	W2	W3	W...		
3	Support Stream																			
4		On-boarding Session with Customer Success Manager																		
5		Presentation of EDB support Portal & Lasso																		
6		...																		
7	Knowledge Transfer Stream																			
8		Postgres Training (4 days) up to 15 people in CET																		
9		Self Paced Training Path for Dev, DevOps, Ops Teams																		
10		Build with TAM a path/program to continuous knowledge transfer (events, workshops, ...)																		
11	C360 MVP Stream																			
12		Design of SOW 1 (3 days)																		
13		Design of SOW 2 (2 days)																		
14		...																		
15	EPAS LAB Stream																			
16		Design of SOW 3 (3 days) ...																		
17		Design of SOW 4 (4 days)																		
18		...																		
19	Engineering Stream																			
20		High Level Design of HA Solution for Microsoft																		
21		...																		
22		...																		
23	EDB Enabling Technologies	EDB e-learning Platform																		
24		Enterprise Fail-over Manager																		
25		Postgres Enterprise Manager																		
26		Barman																		
27		PGD																		
28		TDE																		
29		Migration Toolkit																		
30		Logical Replication																		
31		Hybrid Control Plane																		



3. Free Software



EDB Community 360 Plan

Protect PostgreSQL with EDB Expert Support

Ideal for organizations with an OS first strategy as well as those using PostgreSQL for admin and operational applications



- Open Source Tools
- Community PostgreSQL
- EDB & Community Support
- Cloudnativepg Kubernetes Operator

EDB Standard Plan

Strengthen and extend PostgreSQL with enhanced security, resiliency, reliability and optimization

Perfect for organizations that want to use Postgres with best of breed tools for business-critical applications

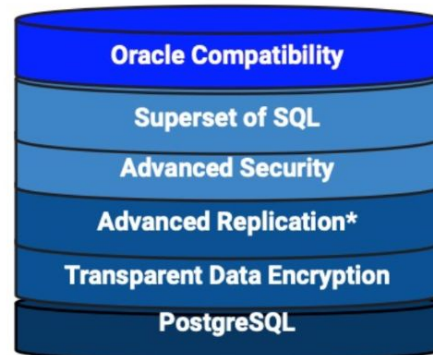


- Open Source Tools
- Community PostgreSQL
- EDB & Community Support
- EDB Postgres for Kubernetes
- EDB Tools & Extension - including PEM
- EDB Postgres Distributed Add-on*

EDB Enterprise Plan

Migrate costly Oracle workloads to Postgres or elevate Postgres to enterprise-grade with advanced security, reliability and much more.

Best choice for Oracle modernization and savings, mission critical applications and systems of record.



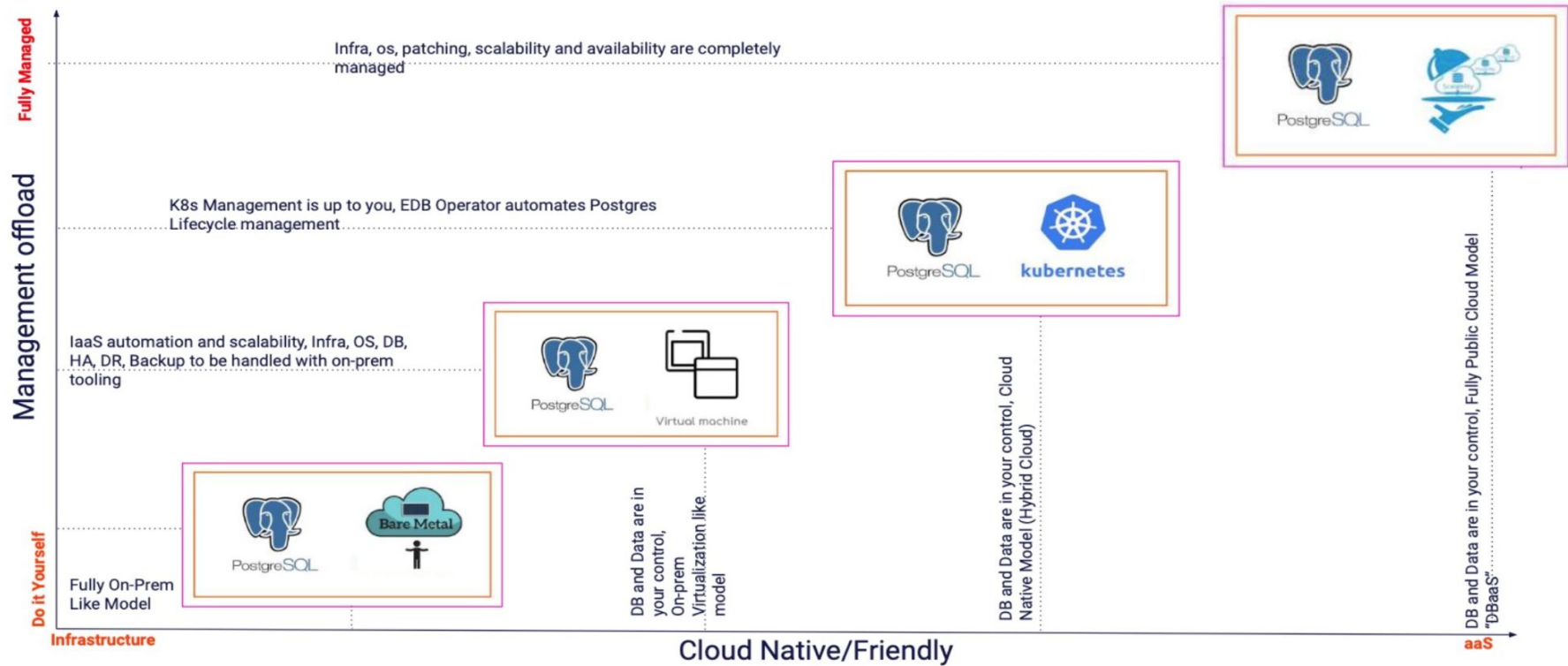
- Open Source Tools
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- EDB Tools & Extension - Including PEM
- EDB Postgres Distributed Add-on*
- EDB Postgres Advanced Server



Technical Support Levels

	Subscription Plan			
		Premium	Production	Basic
	Availability	24 hours x 7 days	24 hours x 7 days	8am - 6pm / Mon - Fri
Initial Response Service Level Objective	Severity-1	15 minutes	30 minutes	N/A
	Severity-2	30 minutes	60 minutes	N/A
	Severity-3	60 minutes	2 hours	4 hours
	Severity-4	1 business day	1 business day	1 business day
Remedy Service Level Objective	Severity-1	4 hours	24 hours	N/A
	Severity-2	8 hours	48 hours	N/A
	Severity-3	10 business days	15 business days	20 business days
	Severity-4	30 business days	45 business days	60 business days
Resolution Service Level Objective	Severity-1	24 hours	N/A	N/A
	Severity-2	5 days	N/A	N/A

EDB Postgres Hybrid Portfolio & Services





EDB

Postgres® for the AI Generation

We provide a sovereign data and AI platform to power mission-critical workloads—deployed anywhere across the globe and backed by unparalleled Postgres expertise.



EDB

Sustainability
Efficiency
Risk Mitigation

Containerized Acceleration

Hybrid Database-as-a-Service

Legacy App Modernization

Migration Factory & Extreme Scalability

Omni-Data Platform

Real-Time Analytics & AI

Sovereign AI

Cost-Effective Data Wherever It Needs to Be

Enterprise Security

Trust Center Guarantee



Analytics Acceleration

18X

cost-effective

Object storage vs. solid state drives (SSDs)

30X

faster

On average for analytical queries compared to Postgres

5X

smaller

On disk Lakehouse tables vs Postgres tables and indexes

4.22X

faster



On average for queries per second compared to other vector databases

Legacy Modernization

Migrate in

**less than
20 days**

95%

Reduction in application rewrites

99.999%

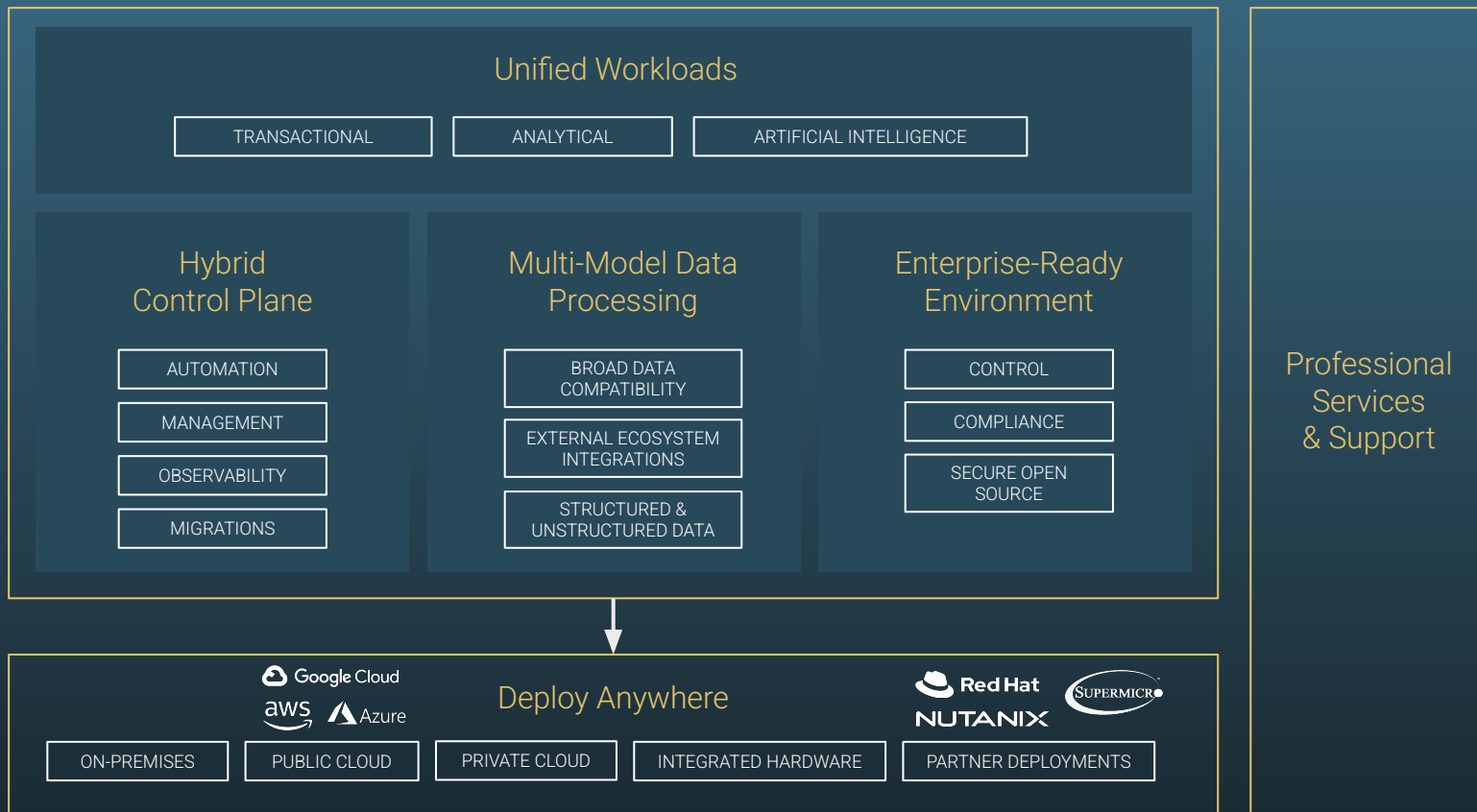
Availability with geo-distributed, active/active clusters

80%

Reduced TCO versus traditional commercial databases



EDB Postgres AI - Sovereign Data & AI Platform



PG.AI

Database

Database Servers

Enterprise Postgres

Oracle Compatible

Community PostgreSQL

Multi-Model Extensions

Management & Observability (Basic)

Kubernetes Operators

Supply Chain Security

Migration Toolkit

High Availability

Analytics Accelerator

Analytics

Columnar Query Engine
MPP Warehouse

Lakehouse Storage

Delta Tables, Iceberg

Support for Greenplum Workloads

AI Factory

Vector Engine

AI Pipeline

GenAI Builder

Agent Orchestrator

Model Serving

Hybrid Management

Hybrid Observability

Hybrid DBaaS

Distributed HA (99.999%)

Migration Center

Deploy Anywhere

ENGINEERED SYSTEM

HYBRID SOFTWARE

MANAGED CLOUD

Deployment Partners: AWS, GCP, Azure, Red Hat, IBM, Supermicro

Integration Services (CX)

Solution Architecture

Pilot to Production SLAs

Managed Services



Integration Services

1 Solution Architecture

Architect your AI and data platform

- Maximize IT agility and business outcome realization with EDB's tailored solution architecture and seamless integration services
- Bridge the gap between your existing systems and EDB's powerful PostgreSQL platform, ensuring a smooth, scalable, and secure data ecosystem.

2 Pilot to Production SLAs

From start to "5 9s" – high availability with outcome SLAs

- Accelerate your critical database deployments from pilot to production with EDB's expertise and integration services.
- Guarantee stringent SLAs, minimize risk, maximize uptime with our proven methodologies, ensuring seamless integration and optimal performance at scale.

3 Managed Services

From 365 technical services to outcome-based SLAs

- Entrust your mission-critical database operations to EDB's comprehensive managed services
- Leverage our deep expertise and robust product suite to ensure peak performance and reliability.
- Focus on strategic innovation while we handle the complexities of your PostgreSQL environment, delivering proactive monitoring, optimization, and expert support, tailored to your unique business needs



Solution Architecture

Ambition: *Architect your AI and data platform*



Database Architecture

- Designing highly available and scalable PostgreSQL architectures.
- Planning for disaster recovery and business continuity.
- Architecting for cloud, on-premises, and hybrid deployments.
- Designing data warehousing and analytical architectures.



Migration Planning

- Developing migration strategies from legacy databases (e.g., Oracle, SQL Server) to EDB Postgres Advanced Server.
- Designing data migration and transformation processes.
- Architecting for minimal downtime during migration.



Performance Optimization

- Designing database schemas and indexing strategies for optimal performance.
- Architecting for query tuning and performance monitoring.
- Designing for high-transaction workloads.



Security & Integration

- Designing secure database architectures with robust access control and encryption.
- Implementing security best practices for data at rest and in transit.
- Architecting for compliance with industry regulations.
- Designing integration solutions for connecting EDB Postgres with other enterprise systems.



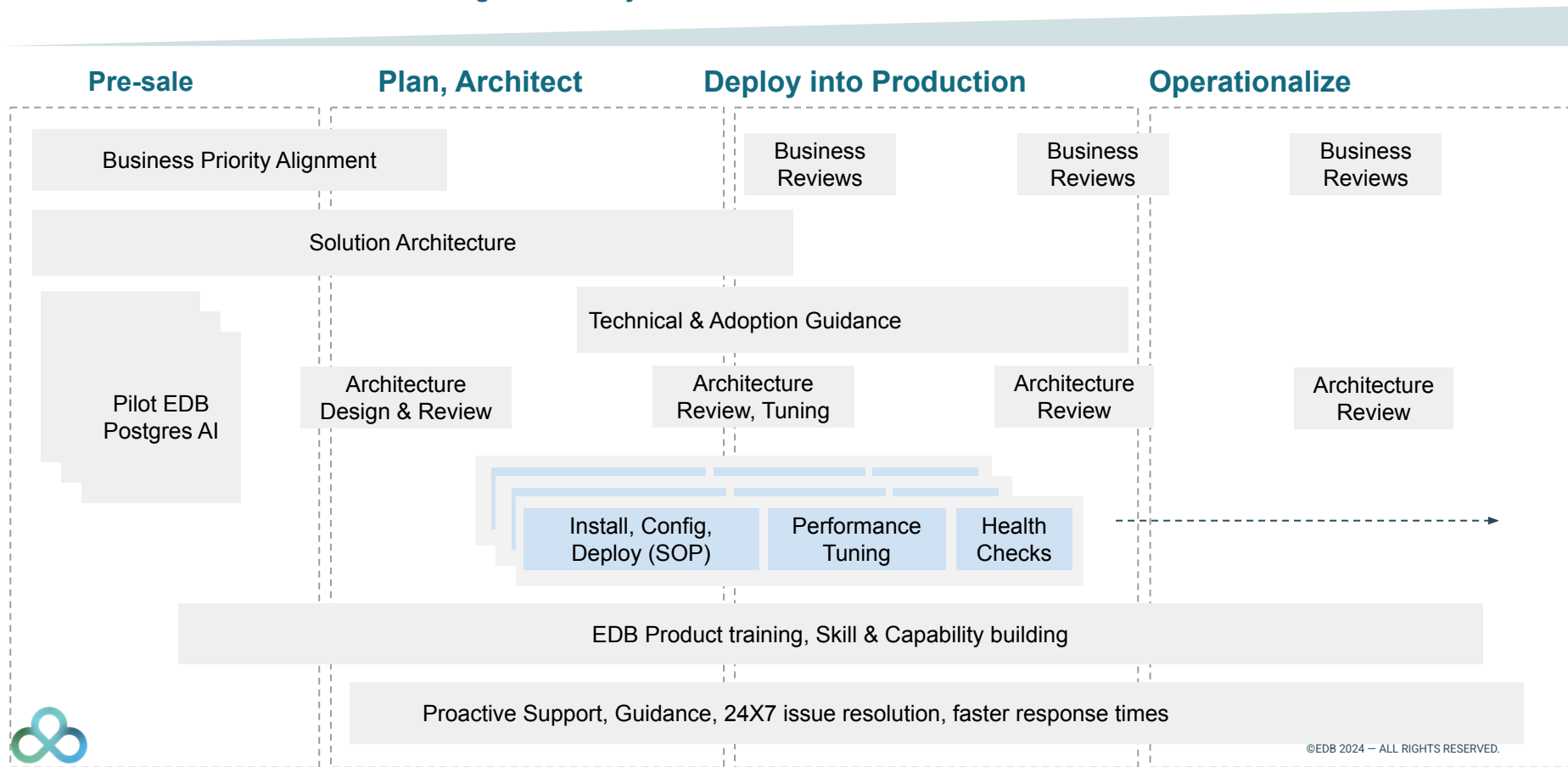
Product Implementation

- Designing the architecture of EDB products such as PEM, EFM, and PGD into the customer's solution.
- Best practice configurations of EDB products.



Pilot to Production

Ambition: *From start to "5 9s" – high availability with outcome SLAs*



Managed Services

Ambition: *From 365 technical services to outcome-based SLAs*

Fully Managed: Onboard/Implement w/SLA

Migration: multi-year effort to migrate from legacy (e.g. Oracle) to Postgres, including most (e.g. 75%) workloads



Analytics/Lakehouse: prepare and optimize customer's data lakehouse and synchronize existing DBs (query perf, lakehouse coverage)



AI Database: prepare and optimize customer data for AI (operationalize ~5 AI workloads)



Postgres High Availability: design and deploy a high availability (99.999%) architecture



Fully Managed: Lifecycle Management w/SLA



Monitor/Manage: core monitoring and management capabilities; security updates, alerting, perf and availability tuning...



Monitor with High Availability: apply an additional SLA/Requirement on top of core, e.g. 99.999% uptime in all geo's



Manage with Governance/Compliance: apply a governance and compliance overlay on monitoring and management services (e.g. maintain Fedramp approval)



Note: Both SLAs include Success, Support, Training and Services

Data Sovereignty

Hybrid Private Cloud Model




Home / Estate


Estate


Quick Actions

PostgresMigrationsLakehouseRecommendations

Active Alerts


High
1


Medium
2


Low
0

Top CPU Usage

Cluster	CPU %
IMDB_PGE in IMDB - Movie Database	65%
IMDB_Community in IMDB - Movie Database	63%
IMDB_PGD in IMDB - Movie Database	33%

Resource Usage

22% CPU

42% Memory







12% Storage

Search...

Filter

Name (A-Z)



Project Name	Cluster	Management	Cluster Type	Status	Engine	Version	Alerts	TPS	CPU	Memory
DB Migrations	CC-AMEX-TEST DB Migrations	Appliance	Single Node	Ok	epas	17	<div>0 High</div> <div>0 Medium</div> <div>0 Low</div>	 14.46/s	 4.29%	 28.1%
+ IMDB - Movie Database	IMDB_Community IMDB - Movie Database	Appliance	HA	Ok	postgres	17	<div>0 High</div> <div>1 Medium</div> <div>0 Low</div>	 609.88/s	 63.05%	 84.1%
	IMDB_PGD						<div>1 High</div>			

AI Acceleration

Virtual Expert Chatbot





Single Pane of Glass

The new AI DB is a single pane of glass for all your AI data. It handles everything from data ingestion to search, making it easy to manage and use.



Managed Pipelines NEW

Managed Pipelines make AI easy. From embedding generation to similarity search, aidb handles everything. Just pick your encoder, and the rest is automatic!

[< Prev](#)[Next >](#)[Learn More](#)

AI Acceleration

Agentic AI





A Success Story

EMEA Payment Leader



Internal journey

Performed escalation management / Resources totally dedicated / Team spent weekend to work on it

Starting point:

- Support Ticket #40904
- Application business transaction performance exceeding KPI (200ms)
- Database SQL BIND takes to long

The underlying challenge:

- Multi party project ownership (Nex: database / PagoPA: application)
- Economic penalties defined in the contract
- Fixed project deadlines



TEAM WORK

Support

Professional Services

Philip Hankinson Solution Architect
Hilary Mc Daniel Senior Delivery Manager

CX and Practice Solution

Vibhor Kumar VP, CX Technical Advisor
Laetitia Avrot Practice Leader

TAM and CSM

Oliver Hofmann Principal TAM
Barbara Milani Senior CSM

Together
Everyone
Achieves
More



COMMUNICATE



TRUST



MOTIVATION

- Daily internal meetings to share results and customer feedback
- Internal Common Plan and Strategy
- Meetings with the customer to share results, trying to reassure him and lower his stress level
- Sharing updates with EDB management
- Sharing updates on the dedicated slack channel and on the ticket channel

Resolution In-depth

Two separate reports:

- **EDB SQL analysis**
SQL structure and tuning

This document prevented Nexi from having to pay penalties to the end customer.

- **Additional recommendations for Nexi DBA team**
Optimizing OS, storage and Postgres

GO-LIVE: end of November

Regular meetings planned to monitor the progress of the project

Health Check to exclude other potential issues.

Explanation how EPAS/PG is designed to handle the SQL statement.

Explain PgBouncer interaction with EPAS and configuration implication.

SQL analysis + rewrite to tune the problematic statements.

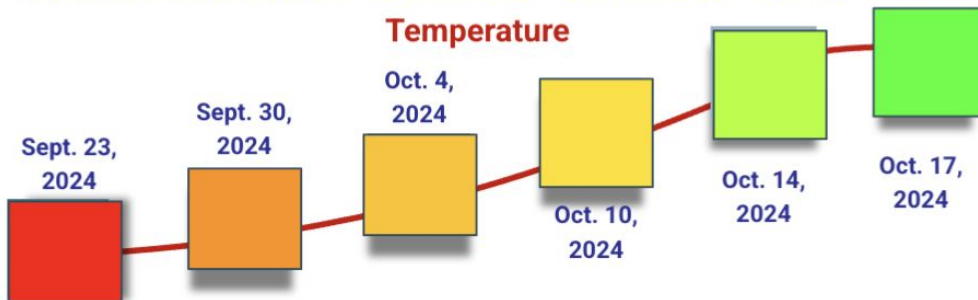
Show the required SQL changes at application layer (Scala-Slick framework).

Show how plain SQL injection in Scala-Slick is possible as well

Compiled additional recommendations for the DBA team

Exclude BIND behaviour being a bug -> explanation why it works as designed

Temperature



SLA Requirements | Before Optimization | After @ EDB



500 TPS
@< 250 ms Latency



**Before
Optimization
222 TPS**
@< 22.4 second
Avg. Latency



**After EDB
Optimization
5100 TPS**
@< 0.979 ms Avg.
Latency



2025 Product Roadmap





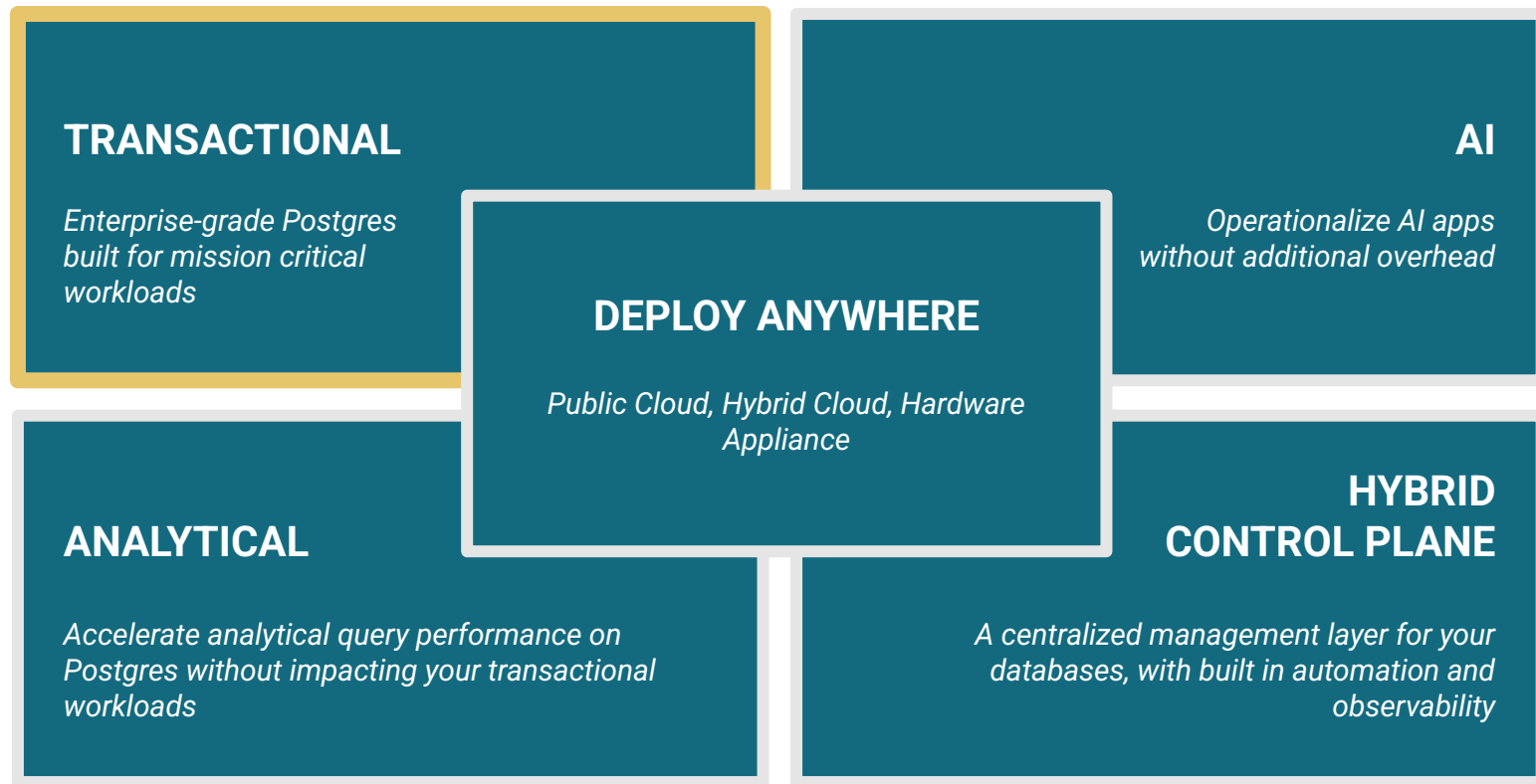
Disclaimer

Statements included in this presentation, other than statements or characterizations of historical fact, are forward-looking statements. These forward-looking statements are based on our current expectations, estimates, and projections about our industry, management's beliefs, and certain assumptions made by us, all of which are subject to change. These forward-looking statements are not guarantees of future results and are subject to risks, uncertainties, and assumptions that could cause our actual results to differ materially and adversely from those expressed in any forward-looking statement.

By sharing our product roadmap with you, we are not undertaking an obligation to develop the software with the features and functionality discussed herein.

The forward-looking statements in this presentation are made as of January 1, 2025. We undertake no obligation to revise or update publicly any forward-looking statement for any reason.

EDB Postgres AI - Detailed 1H Roadmap



Transactions

Hybrid Control Plane

AI

Analytics

1H 2025

*Generally Available (Q2)***EDB Postgres AI - Software & Hardware Deployments**

A centralized management, automation, and observability solution for transactional, analytical and AI workloads. Deployed Anywhere.

- **Simple High Availability for Distributed Architectures** with PGD improved compatibility
- **Automated** Oracle Migration Assessments

Reduced Risk with 5 9s of Availability & Reduced Cost for Migrations

- **Simplified Major Version Upgrades**
- **5x Faster Troubleshooting** with Query Diagnostics
- **Recommendations** for Index & statistics
- **Observability** for AWS RDS

30% Boost in Operational Efficiency

AI Accelerator low code system

- Faster time-to-market to develop agentic AI workloads on Postgres

Pre-trained AI model collection

- Get a jumpstart with supported GenAI models from NVIDIA, no training necessary

5 lines of code compared to 100s

Large-scale warehouse analytics with Greenplum

Analytics Accelerator: Faster time to insights with open Lakehouse analytics

30x Faster Analytical Queries

2H 2025

- **Proactive fixes** with Migration Co-pilot reducing the level of effort for customers

- **Reduced downtime & risk** with Blue/Green Deployments
- **Multi-cloud observability** for Microsoft Azure & Google databases
- **Security and workload** recommendations
- **Multi-Location** High Availability

GPU Acceleration for AI Search

- New, ultra-high performance vector indexing options

End to End AI Management

- Manage, scale and monitor GenAI workloads, measure performance & reliability

Petabyte-scale warehouse analytics

- Faster time to business insights with Greenplum BI integrations

Security

1H 2025

Enhancing Enterprise-Grade Security

Trusted benchmarks (NIST 800-190, FIPS 140-2) for security and compliance

A Grade Security, assessed by leading vendors (RiskRecon, Black Kite)

Enhancing Enterprise-Grade Security

Trusted supply chain for EDB products with Software Bill of Materials

Trusted compliant, verified supply chain for running secure, sovereign AI database workloads

2H 2025

GENERAL AVAILABILITY**EDB Postgres AI for Defense (IL5)**

A centralized management, automation, and observability solution for defense agencies (e.g. Army, Navy) deployed as a cloud service

Enterprise-Grade Security

Increased data protection with data masking

GENERAL AVAILABILITY**EDB Postgres AI for Civilian (FedRAMP High)**

A centralized management, automation, and observability solution for civilian agencies (e.g. USDA, DoJ) deployed as a cloud service

Enhanced Data Security & Encryption

Providing customers with seamless Transparent Column Encryption (TCE)

Q1 Detailed Roadmap - Transactional

WORKLOAD	LINE ITEM	DESCRIPTION	OUTCOME	VALUE DRIVER
Transactional	Thales TDE certified with EDB Postgres Integrate EDB TDE with Thales using REST API (Wells Fargo)	Thales is a leading vendor in the security space, and Thales CipherTrust Transparent Encryption is certified with EDB Postgres, providing enterprise-grade data protection for sensitive and regulated workloads.	EDB customers can now seamlessly integrate with leading Key Management Servers such as Thales ensuring secure data at rest, and regulatory compliance.	Inspire Become an industry thought leader
	PEM v10 Release	PEM v10 is next major version of our established monitoring and management software used by ~30% of customers. Includes major updates to the UI framework and important performance optimizations for larger estates.	Reduced tech-debt allows us to be responsive to our many customer requests, ensuring that we keep delivering value to customers giving them confidence to invest in EDB.	Operate Efficiently Deliver infrastructure automation
	SBOM for DB Servers and PGD - delivered SBOM for CloudNativePG Cluster - Q1'25	Enhancing Software Bill Of Materials (SBOM) support across our product portfolio to strengthen security, ensure software supply chain integrity, and provide greater transparency for enterprise resilience.	Stronger security and compliance with expanded SBOM support, ensuring full software supply chain transparency. Available via our trust center. Enables easier adoption of Postgres on Kubernetes for regulated enterprises.	Inspire Become an industry thought leader
	Enable timescale extension for EDB Postgres Extended (PGE)	EDB Postgres Extended (PGE) will include and package the Timescale extension, enabling time-series data capabilities within PGE.	PGE will support and package the Timescale extension, enhancing time-series data capabilities.	Grow Revenue
	Ransomware Protected Backups	The ability to write backups that can't be overwritten or deleted enables you to recover data even when your servers are hacked and held hostage via a ransomware attack.	Protection for backups against ransomware attacks.	Operate Efficiently



Q1 Detailed Roadmap - Transactional

WORKLOAD	LINE ITEM	DESCRIPTION	OUTCOME	VALUE DRIVER
Transactional	OTEL Extension for unified capture of metrics	Postgres Open Telemetry (OTEL) extension enables seamless integration of Postgres metrics with Open Telemetry, standardizing vendor-neutral observability framework for unified monitoring, troubleshooting, and performance optimization.	By providing a OTEL extension for Postgres, organizations can simplify observability, efficiently collect and stream key metrics to any OTEL-compatible platform.	Operate Efficiently
	In-place major version upgrades of PG and PGD extension in one go	PGD 5.7 is introducing in-place upgrades for Postgres and PGD simplifying major version upgrades. This functionality is designed to work outside of HCP with the plan to be a feature of HCP.	Reduce operational burden and ensure a seamless transition to latest version with minimal downtime.	Operate Efficiently
	EFM next major v5.0	EDB Failover Manager (EFM) v5.0 will introduce support for standby cloning, allowing users to seamlessly clone a standby from a primary, simplifying high availability management with reduced operational overhead.	EFM 5.0 streamlines high availability and reduce operational complexity.	Operate Efficiently
	PGD certified configuration guidelines reducing development time by 80%	PGD 5.7 introduces a new PGD-CLI command to assess Postgres Database Compatibility with PGD, identifying potential issues and providing guidance for a seamless migration.	Simplifies Postgres database compatibility assessment for PGD, reducing migration risks and ensuring a smooth transition.	Operate Efficiently



Q2 Detailed Roadmap - Transactional

WORKLOAD	LINE ITEM	DESCRIPTION	OUTCOME	VALUE DRIVER
Transactional	OLTP Parity w. OracleDB- McKnight Benchmark	<i>According to Benchmarks by a 3rd party (McKnight) we are able to achieve faster TPC-c performance than Oracle.</i>	<i>Better performance post migrations from Oracle.</i>	Grow Revenue
	PGD integration with Golden Gate and Debezium	<i>PGD 5.7 will be adding built-in support for automatic failover of replication slots making database failovers smoother.</i>	<i>Simplifies failovers and ensures database continuity without extra standby nodes.</i>	Operate Efficiently Deliver infrastructure automation
	Integration of DB Servers and CNPG with top Key Management Servers	<i>EDB Postgres already supports the top three key management servers, ensuring secure encryption key handling. We are extending this capability to CloudNativePG-Cluster enhancing security and compliance for containerized deployments.</i>	<i>Expanded key management support in CNPG will enhance security and compliance for containerized Postgres, aligning with enterprise encryption standards.</i>	Operate Efficiently Deliver infrastructure automation



Q2 Detailed Roadmap - Transactional

WORKLOAD	LINE ITEM	DESCRIPTION	OUTCOME	VALUE DRIVER
Transactional	PGD next major v6.0	<i>PGD 6.0 will be a major release, introducing significant enhancements such as default embedded proxy/connection pooling, tiled tables for optimized analytics, and a improved PGD-CLI for seamless Day 0 to Day 2 operations.</i>	<i>PGD 6.0 will drive major cost optimizations by reducing the number of required proxy nodes, lowering analytics workload costs, accelerating time to insights, and significantly cutting operational overhead with fully automated Day 0 to Day 2 operations via PGD-CLI.</i>	Operate Efficiently Deliver infrastructure automation
	CloudNative Plugin Interface (CNPG-I) for EDB CloudNativePG Cluster	<i>Introducing CloudNativePG Interface (CNPG-I) will enable a plugin-based architecture, allowing EDB to deliver proprietary, differentiated features on EDB CloudNativePG Cluster without forking the open-source CloudNativePG.</i>	<i>This will enable enterprise customers using EDB CloudNativePG Cluster to access differentiated, enterprise-grade features seamlessly.</i>	Operate Efficiently
	CloudNativePG enables declarative in-place Major Version Upgrades	<i>CloudNativePG enables a automated, declarative in-place major version upgrade. With built-in rollback capabilities, if an issue arises during an upgrade, operator automatically reverts to previous state.</i>	<i>CloudNativePG customers can now upgrade with confidence, knowing the Operator-driven automation ensures a seamless upgrade to the next major version reducing the operational complexity.</i>	Operate Efficiently
	CNPG-I support for Enterprise Backup & Recovery solution (CNPG-I Support for Incremental Backups)	<i>Enterprise-grade backup and recovery for Postgres on Kubernetes sets a new benchmark in data protection, offering a cloud-native, automated, resilient backup and recovery solution.</i>	<i>Customers using OSS CloudNativePG will see a compelling reason to migrate to EDB CloudNativePG Cluster leveraging enterprise-grade backup and recovery solution.</i>	Inspire Become an industry thought leader



