



EDB Postgres® AI Managed Platform

Top 20 Managed Service Comparison: EDB vs AWS Aurora

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Executive Summary

Organizations evaluating managed PostgreSQL solutions on Amazon Web Services face a choice between AWS-native offerings—primarily Amazon RDS and Aurora—and best-of-breed alternatives such as EDB Postgres AI Managed Platform. This report provides a structured, twenty-point comparison across the dimensions that matter most to enterprise technology leaders: deployment flexibility, availability, cost, migration support, AI readiness, security, compliance, operational automation, and open architecture.

Key findings

Deployment reach: EDB operates identically on-premises, in any public cloud, or hybrid—Aurora is AWS-only, creating real obstacles for organizations with data sovereignty or multi-cloud strategies.

- Availability ceiling: EDB Postgres Distributed guarantees up to 99.999% uptime through geo-distributed, active/active architecture. Aurora's SLA is 99.99%, and active/active across regions requires significant additional configuration.
- Cost advantage: Running EDB in a bring-your-own-AWS-account model delivers 3–5x lower total cost of ownership than Aurora IO Optimized at mid-range to large IO workloads, with costs flowing directly through the customer's existing AWS commit.
- Oracle migration: EDB's native Oracle Compatibility Mode, combined with AI-driven migration assessment and automatic schema conversion, reduces application rewrites by up to 95% and Oracle TCO by up to 80%—capabilities Aurora does not offer.
- PCI-DSS v4.0 readiness: EDB Managed Database's (EMD) SOC2 Type II certification, biometric MFA for engineers, documented data-separation policy (metadata only, never table data), and proactive Tech Alert system provide materially stronger evidence packages for PCI audits than Aurora's shared-responsibility model.
- Day-2 operational efficiency: Five platform automations—image upgrade, memory autoscale, CPU autoscale, storage autoscale, and index application—run continuously with approval gates and full Task Manager audit trails, driving measurable reductions in DBA overhead and over-provisioning waste.
- Open architecture: EDB's CloudNativePG foundation (CNCF-governed), full REST API parity, and MCP server for AI agent access provide a future-ready, vendor-neutral operational model. AWS Aurora has no equivalent path without substantial custom engineering.

Across all twenty dimensions, EDB Postgres AI Managed Platform holds a clear advantage in seven categories, a meaningful advantage in eight, and is broadly comparable in five. Aurora's strengths lie in its deep AWS-native integration and the breadth of the AWS ecosystem—a genuine advantage for teams building exclusively within AWS. For enterprises with hybrid requirements, PCI-regulated workloads, Oracle modernization programs, or ambitions for AI-driven database operations, the evidence consistently favors EDB.

Detailed Comparison

Dimension	EDB Postgres AI Managed Platform	AWS Aurora
Points 01-10 · Core managed service capabilities		
01 Deployment flexibility Cloud & hybrid	Advantage Runs on-premises, hybrid, or any public cloud. Container-driven automation provides the same managed experience everywhere with no single-CSP dependency.	AWS only Fully managed but locked to AWS. Hybrid or on-premises deployments are not supported, creating friction for organizations with data sovereignty or private-cloud requirements.
02 Uptime SLA High availability	Up to 99.999% Active/active geo-distributed architecture with automated failover. No DBA interaction needed during a regional outage – queries simply repoint to the nearest available node.	99.99% Multi-AZ replication provides strong within-region availability. Cross-region active/active requires extra configuration and falls short of EDB's guaranteed ceiling.
03 Total cost of ownership Financial efficiency	3-5× lower vs Aurora Bring-your-own-AWS-account pricing passes compute and storage costs through the customer's existing AWS commit. IO-intensive workloads scale far cheaper than Aurora IO Optimized.	Escalates at scale Aurora IO Optimized can exceed \$3,000/month for mid-range configs where EDB sits near \$1,700. Costs rise sharply with higher IOPS tiers; performance insights and connection pooling add further line items.
04 Oracle migration support Modernization	Native compatibility Built-in Oracle Compatibility Mode with AI-driven migration assessment and automatic schema conversion. Reduces application rewrites by up to 95% and Oracle TCO by up to 80%.	Not included No native Oracle compatibility. Migrations require AWS Schema Conversion Tool plus significant manual effort for stored procedures, data types, and application-level rewrites.
05 AI & GenAI readiness Platform capability	Unified platform Vector databases, automated AI pipelines, Lakehouse analytics clusters, and a low-code GenAI builder are all part of the same managed data plane – up to 3× faster GenAI time-to-value.	Via AWS ecosystem AI capabilities require assembling separate services (Bedrock, SageMaker, OpenSearch). Aurora provides no native vector pipeline or GenAI builder – integration effort and cost are additive.
06 Expert Postgres support Managed service	Dedicated experts 24/7/365 break-fix support from the world's largest PostgreSQL contributor. EDB isolates Postgres-specific issues from cloud infrastructure problems – no generalist triage.	General cloud support AWS support covers infrastructure broadly. Deep Postgres engine expertise is not a primary capability – database-level issues may be escalated more slowly or require customer expertise to diagnose.
07 Security & compliance Enterprise security	Enterprise hardened Transparent Data Encryption (TDE) with external key management via AWS KMS, row-level security, database auditing, and fine-grained access management – features normally limited to commercial databases.	Strong baseline Aurora provides encryption at rest and in transit, IAM integration, and VPC isolation. TDE with external key management and database-level auditing are not natively available.
08 Version upgrades & patching Managed service	Proactive managed EDB's experts handle version upgrades, security patching, and provisioning as part of the managed service. Distributed HA management tier includes lifecycle management with near-zero downtime.	Automated but disruptive Aurora automates minor patches. Major version upgrades can cause brief outages and have been cited as a source of customer-facing disruptions during the upgrade window.

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09 Observability & monitoring Visibility	Unified estate view Single console spans managed EDB clusters on AWS, self-managed Postgres on EC2, private cloud, and on-premises databases via the PG AI agent. Intelligent recommendations are built in.	CloudWatch native Deep AWS CloudWatch integration with Performance Insights. Monitoring is strong within the AWS boundary but offers no unified view across hybrid or non-AWS environments.
10 Kubernetes & skills required Operational burden	No expertise needed EDB's team installs, configures, and operates the container-driven platform. Customers gain a production-ready environment without needing in-house Kubernetes or advanced Postgres skills.	Abstracted by AWS Aurora abstracts Kubernetes from users, but the tradeoff is loss of portability and control. Teams needing hybrid or on-premises parity must build separate stacks with different skill sets.
Points 11–15 · PCI-DSS v4.0 managed service support & Remote DBA security		
11 Encryption & key management PCI-DSS v4.0 Req 3 & 4	End-to-end managed TDE with external key management via AWS KMS covers data at rest. All EMD traffic – monitoring, ticketing, attachments – is encrypted with TLS 1.2+. Engineer endpoint drives and Amazon S3 storage used in service delivery are also encrypted. <i>EMD whitepaper: all server partitions encrypted; TLS 1.2+ for all data in transit.</i>	Strong at infrastructure level Aurora encrypts data at rest using AWS KMS and in transit via TLS. TDE with key management external to the database engine is not natively available – key custody remains within the AWS boundary, complicating CDE scoping.
12 Access control & least privilege PCI-DSS v4.0 Req 7 & 8	Granular, audited controls EMD engineers operate under individual named accounts where feasible, with biometric MFA mandatory. Internal VPN is required before any customer system can be reached. Onboarding, change, and offboarding procedures are standardized and audit-confirmed. <i>EMD whitepaper: MFA with biometrics, VPN requirement, individual user accounts, regular access control review procedures.</i>	IAM-based Aurora integrates with AWS IAM for access control and supports fine-grained database roles. There is no managed DBA access layer with biometric MFA or documented individual-engineer-level access auditing as part of the service.
13 Audit logging & activity monitoring PCI-DSS v4.0 Req 10	Full-stack audit trail EDB Postgres AI includes database-level auditing. The EMD Sentinel monitoring agent continuously collects database and OS metadata. All engineer actions are traceable through the UAI hop-box infrastructure. The EDB Portal provides an immutable audit trail of all ticket interactions. <i>EMD whitepaper: Sentinel collects DB and OS data; UAI records all access; Portal is source-of-truth for all engineer-customer communication.</i>	CloudWatch & activity streams Aurora Database Activity Streams can feed logs to SIEM tools. Audit coverage of managed service engineer activity within the database is not part of Aurora's native offering – customers must configure and maintain this themselves.
14 Vulnerability management & patching PCI-DSS v4.0 Req 6 & 12	Proactive, SOC2-backed EDB EMD is SOC2 certified. Sentinel undergoes regular internal and independent external penetration testing. When a critical CVE hits PostgreSQL or EDB software, Tech Alerts are issued proactively to all affected customers with a named remediation plan. <i>EMD whitepaper: SOC2 certified; regular vuln scans and independent pen testing; Tech Alert system for CVE notification and remediation.</i>	Automated patching, limited proactivity Aurora handles minor patch application automatically. AWS publishes security bulletins but does not provide a dedicated remediation plan per customer for database-engine CVEs. Major version upgrades require customer-initiated action.

Dimension	EDB Postgres AI Managed Platform	AWS Aurora
Points 11–15 · PCI-DSS v4.0 managed service support & Remote DBA security (cont.)		
15 Compliance certification & shared responsibility PCI-DSS v4.0 Req 12	SOC2 + clean data separation EDB EMD is SOC2 Type II certified. All vendors in the service delivery chain must hold SOC2 or ISO 27001. EMD engineers are trained never to access actual table data – only metadata and logs. Cardholder data never enters tickets, monitoring streams, or EDB systems, materially simplifying CDE scoping. <i>EMD whitepaper: SOC2 certified; engineers access only metadata/logs, never table data; actual data in tickets triggers a security incident report.</i>	PCI-compliant infrastructure AWS holds PCI-DSS certification for its infrastructure and Aurora is within scope. However, the shared responsibility model places database configuration, access policies, auditing, and data handling squarely on the customer.
Points 16–20 · Day-2 platform capabilities driving managed service efficiency		
16 Policy-driven patching with approval gates Day-2 productivity	Fully orchestrated New minor and patch images are tracked and applied on a per-cluster schedule with named maintenance windows, configurable cooldown intervals, and optional per-task approval gates. Emergency CVE patches can bypass the window and trigger immediately. Every patch event flows through a 6-step lifecycle with replicas updated before the primary. <i>Platform deck: automatic-image-upgrade automation; rolling restart replicas first; full Task Manager audit entry per run.</i>	Automated, limited control Aurora applies minor patches automatically but offers limited granularity over scheduling, approval workflows, or per-cluster policies. Major version upgrades require customer initiation and can introduce brief downtime with no built-in approval gate or cooldown mechanism.
17 Deep query diagnostics & recommendations scorecard Day-2 productivity	Per-query, per-node attribution Top queries are ranked by total time, CPU, and wait active average sessions with p50/p90/p99 latency breakdowns and per-statement histograms. A continuous scorecard grades the workload across five dimensions – indexes, statistics, configuration, security, and workload – and can automatically apply index recommendations under approval. <i>Platform deck: Query Diagnostics + Recommendations Scorecard; apply-index-recommendation automation with approval gate.</i>	Performance Insights Aurora Performance Insights provides query-level wait analysis and top SQL views. It lacks the five-dimension recommendations scorecard, per-query latency histograms at p50/p90/p99 depth, or an automated index-apply workflow.
18 Autonomous autoscaling – compute, memory & storage ESG optimization	Three independent automations Three definition-driven automations run continuously: memory-autoscale grows instance memory on buffer pressure; cpu-autoscale right-sizes vCPUs based on observed load; and storage-auto-scale expands the primary disk before saturation using percentage-based or fixed-increment growth. Every scaling action creates a traceable Task Manager entry. <i>Platform deck: memory-autoscale, cpu-autoscale, storage-auto-scale automations; Task Manager audit trail per action.</i>	Aurora Serverless v2 Aurora Serverless v2 provides automatic compute scaling within a defined ACU range and automatic storage scaling. It lacks independent memory and CPU autoscale policies, per-cluster approval gates, or an auditable task-per-scaling-event model.

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19 Built-in ESG & governance reporting ESG optimization	Evidence as a byproduct Four evidence streams are generated automatically: scheduled Cluster Health Reports covering per-node uptime, WAL stats, and buffer hit ratio; Usage Reports providing estate-wide compute and storage trends for chargeback; the Activity Log capturing every system and user action with exportable compliance evidence; and Top-Query Profiles surfacing CPU and wait attribution at p50/p90/p99. <i>Platform deck: Cluster Health Reports, Usage Reports, Activity Log with custom events, Top-Query Profiles — all feeding ESG and governance directly.</i>	Not native to Aurora Aurora provides no native ESG or sustainability reporting. CloudWatch and Cost Explorer can be assembled into usage dashboards, but producing a governed evidence trail for ESG, chargeback, or compliance purposes requires custom tooling and significant operational overhead.
20 REST API parity & MCP server for AI agent access Open architecture	API-first, agent-ready Every console action is an API call — no UI-only operations exist. The public OpenAPI-described REST API covers all cluster operations, with token-based auth, role-scoped permissions, webhooks, and generated client SDKs. An MCP server exposes the full API as a tool catalog for AI agents subject to the same RBAC and audit trail as human operators. The model stays inside the customer's security boundary. <i>Platform deck: REST API OpenAPI spec; MCP server — same RBAC + audit trail; bring your own model, sovereign boundary.</i>	AWS SDK & CLI Aurora is fully accessible via the AWS SDK, CLI, and CloudFormation/Terraform. There is no MCP server or AI agent access layer. Automating database operations beyond infrastructure provisioning requires assembling Lambda functions, EventBridge rules, and custom tooling.

Source Materials

- EDB Postgres AI: How to Reduce Your TCO and Improve Postgres Performance on AWS (EDB whitepaper, 2024)
- EDB Postgres AI Managed Platform Datasheet (EDB, 2025)
- EDB EMD Security Whitepaper (EDB, 2024)
- EDB Postgres AI: Day-2, ESG & Open Architecture Platform Overview (EDB, April 2026)
- AWS Aurora documentation — SLA, pricing, and feature reference (AWS, 2026)



EDB Postgres® AI (EDB PG AI) is the sovereign AI data system for the agentic enterprise. Built on Postgres, the world's leading open source database, EDB PG AI unifies transactional, analytical, and AI workloads in a single governed architecture, on-premises and across clouds. To learn more, visit www.enterprisedb.com.