

UNVARNISHED REVIEWS

CockroachDB vs. YugabyteDB vs. TiDB: The Node-Count Trap

Market Position: Big Picture

CockroachDB, YugabyteDB, and TiDB are the three most-compared distributed SQL (NewSQL) databases for teams outgrowing single-node Postgres or MySQL and needing horizontal scale-out with strong consistency and ACID transactions, without application-owned sharding. All three are credible, well-reviewed platforms serving overlapping but distinct positioning: CockroachDB and YugabyteDB both lead with PostgreSQL wire compatibility and multi-region-first architecture, while TiDB leads with MySQL compatibility and a built-in HTAP (hybrid transactional/analytical) path via its TiFlash columnar engine.

The finding that should change how any of the three gets budgeted: comparing list prices per vCPU alone is misleading, because the three don't provision capacity the same way. CockroachDB and YugabyteDB run SQL and storage together on every node, a straightforward vCPU-for-vCPU comparison. TiDB separates them into distinct node types, TiDB nodes for the SQL layer, TiKV nodes for storage, and optionally TiFlash nodes for analytics, meaning its minimum viable production topology requires more total infrastructure than a single "per vCPU" rate implies.

Platform Ratings at a Glance

Platform	G2 Rating	Reviews (G2)	Note
TiDB (PingCAP)	4.6 / 5	~67	Named a Leader in G2's Spring 2026 Relational Databases Grid Report
YugabyteDB	4.5 / 5	~65	Largest review base of the three
CockroachDB	4.3 / 5	~29	Smallest review base; skews small-business (55.6% of reviews)

All three cluster within 0.3 points of each other, meaning satisfaction alone doesn't strongly differentiate them. Reviewers consistently flag a real learning curve across all three, distributed SQL architecture concepts (replication, rebalancing, consensus protocols) take real ramp-up time regardless of vendor.

CockroachDB: Postgres-First, Multi-Region-Native

CockroachDB Cloud publishes tiered pricing across four levels: Basic (serverless, pay-as-you-go, scales to zero) is free up to 50 million Request Units and 10 GiB storage per month, then roughly \$0.20 per additional million RUs and \$0.50 per GiB-month. Standard provisions dedicated vCPUs starting at \$0.18/vCPU-hour (about \$131/month for one vCPU running continuously), scaling to 200 vCPUs. Advanced starts at \$0.60/vCPU-hour, consistent with Vendr's independently reported Dedicated list range of \$0.60-\$1.20/vCPU-hour depending on cloud provider and region, and adds Azure support, additional regions, multi-region replication, and compliance controls (CMEK, HIPAA/PCI).

A third deployment path exists beyond Cloud: CockroachDB Self-Hosted (Enterprise) licenses per core for teams running the database on their own infrastructure, on-premises or in a customer-managed cloud environment. List pricing runs \$1,500-\$3,000 per core annually depending on support tier, with minimum enterprise contracts commonly starting around \$50,000. Deployments in the 32-64 core range typically land at \$60,000-\$130,000 annually; 100+ core implementations commonly reach \$150,000-\$350,000 or more.

Verified transaction data from Vendr puts the median CockroachDB contract at \$185,010/year, with observed deals ranging from \$66,327 to \$622,226. Buyers who negotiate annual commits with competitive context (actively evaluating YugabyteDB, TiDB, or Google Cloud Spanner) commonly achieve 15%-25% off list; three-year commitments push that to 25%-35%.

Vendr's transaction data shows annual Dedicated contracts for production workloads commonly running \$25,000 to over \$200,000 depending on cluster size, multi-region requirements, and commitment level, with sustained Serverless spend above \$3,000-\$4,000/month often achieving better unit economics by migrating to a negotiated Dedicated annual contract.

YugabyteDB: The Closest Price Match to CockroachDB, With a Simpler Tier Structure

YugabyteDB Aeon prices per vCPU across three tiers: Standard starting at \$125/vCPU/month, Professional starting at \$167/vCPU/month (adds advanced multi-region capabilities, region-level resilience, and data-residency compliance features), and Enterprise at custom pricing. Confirmed independently via YugabyteDB's own AWS Marketplace annual-commitment listing, which prices a 12-month commitment at \$2,000/vCPU/year, exactly matching the \$167/vCPU/month Professional list rate when annualized.

YugabyteDB's core database is Apache 2.0 licensed and free to self-host; YugabyteDB Anywhere, the self-managed operations platform, carries its own separate licensing that should be confirmed for any self-hosted deployment, since it is not covered under the same open-source terms as the core database.

TiDB: MySQL-Compatible, With a Distinctly Different Cost Shape

TiDB Cloud has four tiers. Starter (renamed from Serverless in August 2025) is free with a monthly quota, then bills \$0.10 per million Request Units and \$0.20/GiB-month for storage in standard US regions (premium regions cost more). Essential adds provisioned Request Capacity Units with a 2,000-RCU minimum, starting around \$400/month before any data is stored. Dedicated is node-based and billed hourly, starting around \$0.44/hour for a 4-vCPU node, available on AWS, Google Cloud, and Azure. Self-Managed TiDB is open source under Apache 2.0 with no software licensing fee.

The structural difference worth understanding before comparing TiDB's rate to a per-vCPU competitor: production TiDB clusters require at minimum two TiDB nodes (the stateless SQL layer) plus three TiKV nodes (the distributed storage layer), and optionally TiFlash nodes for HTAP analytics. PingCAP's own published cost example models exactly this: a cluster with two 8-vCPU TiDB nodes and three 8-vCPU TiKV nodes, a 40-vCPU minimum footprint before a single query runs. This isn't a pricing flaw, TiDB's separated compute/storage architecture is a real technical differentiator, particularly for HTAP use cases, but it means the effective vCPU-for-vCPU cost comparison to CockroachDB or YugabyteDB requires modeling total cluster footprint, not just the quoted hourly node rate.

Pricing (July 2026)

Platform	Entry Tier	Standard Provisioned Rate	Minimum Production Topology
CockroachDB	Free (Basic, 50M RUs + 10GiB/mo)	\$0.18/vCPU-hour (~\$131/vCPU-month)	3-node cluster, homogeneous nodes
YugabyteDB	Free trial (Sandbox, single node)	\$125/vCPU-month (Standard)	3-node cluster, homogeneous nodes
TiDB	Free (Starter, quota-based)	~\$0.44/hour per 4-vCPU node (Dedicated)	5-node minimum: 2 TiDB + 3 TiKV nodes

TCO Comparison: Comparable Production Capacity, 1 Month

This scenario models each platform at a realistic minimum production topology rather than an artificial matched vCPU count, since the three don't provision capacity the same way.

Platform	Topology	Total vCPUs	Monthly Cost	Effective \$/vCPU-Month
YugabyteDB Standard	3-node cluster, 8 vCPU each	24	\$3,000	\$125
CockroachDB Standard	3-node cluster, 8 vCPU each	24	\$3,154	\$131
TiDB Dedicated	2 TiDB + 3 TiKV nodes, 8 vCPU each	40	\$4,144	\$104

TiDB's effective per-vCPU rate is the lowest of the three, roughly 21% below CockroachDB's and 17% below YugabyteDB's. But because its minimum viable production topology requires 40 total vCPUs against the other two's 24, the real monthly bill for a baseline production deployment is roughly 31%-38% higher than CockroachDB or YugabyteDB at comparable node count. Neither number alone tells the full story, a buyer comparing only the per-vCPU rate will underestimate TiDB's real cost, and a buyer comparing only the monthly total without understanding TiDB's architecture will conclude it's simply more expensive when its unit economics are actually the most favorable of the three.

Costs the Pricing Table Misses

- **TiDB's TiFlash nodes are a separate, additional cost.** HTAP analytics requires provisioning TiFlash columnar replica nodes on top of the TiDB/TiKV minimum; budget this as a distinct line item if analytics-on-fresh-data is a requirement, not an assumed included feature.
- **CockroachDB's Serverless-to-Dedicated migration threshold.** Vendir's own data shows sustained spend above \$3,000-\$4,000/month on Serverless typically justifies migrating to a negotiated Dedicated contract; staying on Serverless past that point is a common, avoidable overspend.
- **YugabyteDB Anywhere's separate licensing for self-hosted operations.** Not covered under the same Apache 2.0 terms as YugabyteDB core; confirm current licensing terms before assuming self-hosted deployment is fully open source end-to-end.
- **All three replicate data 3x by default.** Storage costs quoted per-GiB understate real storage spend by roughly 3x once replication factor is applied; model replicated storage, not raw data size.
- **None of the three's published rates include egress, backup retention, or premium-region multipliers.** Get an itemized quote covering these specifically before comparing any two platforms' headline rates.
- **CockroachDB Self-Hosted is a separate licensing path most Cloud-focused comparisons skip.** Per-core annual licensing (\$1,500-\$3,000/core) with a roughly \$50,000 minimum contract is a real option for teams wanting to run CockroachDB on their own infrastructure, distinct from the Cloud pricing most published comparisons default to.

The Decision Framework

Choose CockroachDB if: Multi-region, active-active deployment is a core requirement, your team is Postgres-first, and you want the widest range of managed tiers from free serverless through custom enterprise self-hosted.

Choose YugabyteDB if: You want Postgres compatibility with a simpler, more predictable per-vCPU pricing structure than CockroachDB's mixed consumption-and-provisioned model, and your workload profile is well-suited to a straightforward vCPU-scaling approach.

Choose TiDB if: Your team is MySQL-first, you need HTAP capability (real-time analytics on live transactional data) without a separate ETL pipeline, and you can budget for its larger minimum production footprint in exchange for the lowest effective per-vCPU rate of the three.

Everyone: Model your actual minimum production topology, not just the headline per-vCPU or per-node rate, before comparing platforms. The gap between CockroachDB and YugabyteDB's list prices is smaller than positioning suggests, and TiDB's real monthly cost depends entirely on its distinct node-count requirements, not a simple per-vCPU multiplication.

The Bottom Line

CockroachDB, YugabyteDB, and TiDB are all credible, well-reviewed distributed SQL platforms, each serving a distinctly different technical profile: CockroachDB and YugabyteDB for Postgres-first, multi-region-native workloads, and TiDB for MySQL-first teams needing built-in HTAP. The real finding this comparison surfaces isn't which platform is cheapest, it's that per-vCPU pricing alone is the wrong lens for comparing all three: CockroachDB and YugabyteDB price within 5% of each other at their entry provisioned tier, while TiDB's lowest-in-category per-vCPU rate is offset by an architecturally larger minimum node count. Model your real topology before comparing rate cards.