AWS Databases

The right tool for the right job

When it comes to the cloud, one-size-fits-all monolithic databases are relics of the past. Developers now build highly distributed applications by breaking complex applications into smaller pieces and then picking the best tool to solve each problem. AWS offers purpose-built database services that address different problems faced by today's developers so that they never have to make tradeoffs around functionality, performance, or scale.

Relational

Relational databases store data with predefined schemas and relationships between them. These databases are designed to support ACID transactions, and maintain referential integrity and strong data consistency.

Amazon Aurora

USED FOR

Enterprise applications, ERP, CRM, and ecommerce

EPIC verizon

Key-value

Key-value databases are optimized for common access patterns, typically to store and retrieve large volumes of data. These databases deliver quick response times, even in extreme volumes of concurrent requests.

Amazon DynamoDB

USED FOR

High-traffic web apps, ecommerce systems, and gaming apps

REDFIN SAMSUNG

Document

A document database is designed to store semistructured data as JSON-like documents. These databases help developers build and update applications quickly.

Amazon DocumentDB

USED FOR

Content management, catalogs, and user profiles

CapitalOne DOWJONES

In-memory

In-memory databases are used for applications that require real-time access to data. By storing data directly in memory, these databases deliver microsecond latency to applications for whom millisecond latency is not enough.

Amazon ElastiCache

USED FOR

Caching, gaming leaderboards, and real-time analytics

Adobe airbnb

Graph

Graph databases are for applications that need to navigate and query millions of relationships between highly connected graph datasets with millisecond latency at large scale.

Amazon Neptune

USED FOR

Knowledge graphs, fraud detection, social networks, and recommendations

intuit SIEMENS

Time Series

Time-series databases efficiently collect, synthesize, and derive insights from data that changes over time and with queries spanning time intervals.

Amazon Timestream

USED FOR

IoT applications, DevOps, and industrial telemetry

IN PREVIEW

Ledger

Ledger databases provide a centralized and trusted authority to maintain a scalable, immutable, and cryptographically verifiable record of transactions for every application.

Amazon Quantum Ledger Database

USED FOR

Systems of record, supply chains, registrations, and banking transactions

IN PREVIEW

Search

Search databases securely ingest data from any source to search, analyze, and visualize in real time by using indexes to categorize similar characteristics among data.

Amazon Elasticsearch Service

USED FOR

Log analytics, full-text search, and application monitoring

Expedia AUTODESK

Why use AWS databases?

The growth of internet-scale applications in ecommerce and social media, the rise of online gaming and streaming services, and the explosion of connected devices have resulted in new workloads that require higher scale, faster responsiveness, and better manageability and reliability. AWS provides a diverse data platform to meet the needs of the most demanding applications in the cloud.

Scale

Build internet-scale applications

Build globally distributed and internet-scale applications that handle millions of requests per second over hundreds of terabytes of data. AWS database services scale up and down automatically to accommodate your high traffic and spiky workloads. You pay for only the resources you use to optimize cost savings. You don't need to maintain servers, upgrades, or patches, and your applications have automated high availability.

Speed

Build real-time applications

Real-time application use cases such as gaming leaderboards, ride hailing, social media messaging, and online shopping need microsecond latency and high throughput. You can improve the performance of real-time application use cases by retrieving information from fast, managed, in-memory data stores and caches, instead of relying entirely on slower disk-based databases.

Managed

Build open source applications

Mobile and web applications generate millions of read and write requests per day, creating performance demands on popular open source databases such as MySQL, PostgreSQL, MongoDB, and Redis. By moving your open source databases to fully managed services, you can eliminate the need to build and manage your own clusters, ensuring highly availability and performance while reducing operational overhead.

Reliable

Build enterprise applications

Enterprise applications run core corporate functions, such as customer service, human resources, or billing. They also run line-of-business applications, such as a reservation system at a hotel chain or a risk-management application at an insurance company. You can use fully managed relational databases to build scalable, reliable, and secure enterprise applications quickly in the cloud.`

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