Amazon Relational Database Service
Easy to manage relational databases optimized for total cost of ownership

Amazon Relational Database Service (known as Amazon RDS) is a database service that's best suited for storing, managing, and querying structured data. This includes creating tables, defining schema, and manipulating data.

With Amazon RDS, you don't need to provision hardware, install additional software, or manually scale the database. Amazon RDS completes these tasks automatically.

Benefits

- **Primary database instance:** The main database that handles read and write operations.
- **Read replica:** A read-only copy of the primary database.
- **Multi-AZ deployment:** Maintains a synchronous standby replica in a different Availability Zone (AZ).
- **Database snapshots:** Creates point-in-time backups of your database.
- **DB instance class:** Determines the DB instance type and the size.
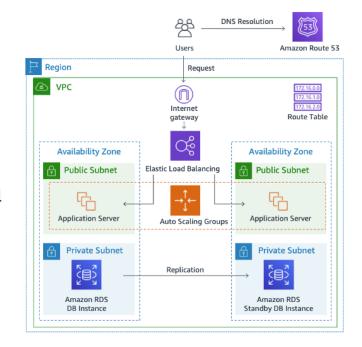
How It Works

The image shows a typical use case of a dynamic website that uses Amazon RDS for database storage. AWS routes user traffic through Elastic Load Balancing, which forwards the requests to application servers. These application servers interact with RDS DB instances.

The application servers and DB instances reside in different Availability Zones within the same Virtual Private Cloud (VPC).

The primary DB instance replicates to another DB instance, called a *read replica*. Both DB instances are in private subnets within the VPC.

Use Cases

E-commerce platforms
Offers high-availability and performance needed for managing user data, product catalogs, and transactions in a structured format.

Analytics and business intelligence
With read replicas, Amazon RDS can support heavy workloads for reporting purposes.

Dynamic website and mobile applications
Provides a scalable and reliable database backend.