Request/Response

Internet gateway

Availability zone 1

Availability zone 2

VPC

ELB

Auto Scaling group

EC2

EC2

RDS

RDS

Component functions:

Amazon VPC:
Provides a private network environment in AWS with control over IP address range, subnets, and routing.

Elastic Load Balancer (ELB):
Distributes incoming traffic evenly across multiple EC2 instances for increased fault tolerance.

Amazon EC2 Instances:
Application servers within private subnets for enhanced security. They process incoming requests and interact with the database.

Amazon RDS:
AWS managed relational database service with automated administration tasks. A Multi-AZ deployment ensures data redundancy and fast failover.

Traffic Flow:
Clients send requests which hit the ELB. The ELB routes these requests to EC2 instances which communicate with the RDS to fetch/update data. Responses are sent back to the client via the same path. This design is fault-tolerant and highly available.

Security groups should be properly configured to permit necessary traffic only, ensuring optimal security.