AWS Music Application Architecture with VPC and Auto Scaling

This architecture is designed to host a music player application on AWS, ensuring high availability and scalability.

# 1. VPC (Virtual Private Cloud)

The application is deployed inside a VPC, ensuring network isolation and secure management of resources.

# 2. Application Servers (EC2 Instances)

Multiple EC2 instances (App Server N, App Server 1, and App Server 2) host the music application. These servers handle user requests, manage music files, and interact with the storage and database layers.

# 3. Music Storage (S3 Bucket)

AWS S3 is used to store music files. The application servers store and retrieve the music files from this highly durable and scalable storage service.

# 4. User Data (DynamoDB)

User data and song information are stored in DynamoDB, a fully managed NoSQL database service. It provides fast and predictable performance with seamless scaling.

# 5. EC2 Auto Scaling Group

The application servers are part of an Auto Scaling group, which dynamically adjusts the number of EC2 instances based on the load. This ensures that the application can handle varying traffic while minimizing costs.

# 6. Load Balancer

A load balancer is placed in front of the application servers to distribute incoming traffic evenly across all instances. This enhances the system’s fault tolerance and improves response times.