

Application Load Balancer (ALB)

Distributes traffic across ECS tasks | SSL/TLS termination



ECS Cluster / Kubernetes

API Gateway

Auth Service

Order Service

Payment Service

Inventory Service

User Service

Auto-scaling based on CPU/Memory metrics



RDS PostgreSQL

Multi-AZ deployment

ElastiCache Redis

Cluster mode enabled

Amazon MQ

RabbitMQ managed

S3 Buckets

Product images, user uploads | CloudFront CDN for delivery

Docker Containerization

```
# Multi-stage Dockerfile for NestJS Service
FROM
node:18-alpine
AS
builder
WORKDIR
/app
COPY
package*.json ./
RUN
npm ci
COPY
. .
RUN
npm run build

FROM
node:18-alpine
WORKDIR
/app
COPY
--from=builder /app/dist ./dist
COPY
--from=builder /app/node_modules ./node_modules
EXPOSE
3000
CMD
["node", "dist/main.js"]
```