

## **STEP-1:**

### **Start LocalStack**

```
>>localstack start
```

### **Configure AWS CLI to use LocalStack**

```
>>aws configure --profile localstack  
>>AWS Access Key ID [None]: test  
>>AWS Secret Access Key [None]: test  
>>Default region name [None]: us-east-1  
>>Default output format [None]: json
```

### **Set environment variables**

```
export AWS_ACCESS_KEY_ID=test  
export AWS_SECRET_ACCESS_KEY=test  
export AWS_DEFAULT_REGION=us-east-1  
export LOCALSTACK_HOSTNAME=localhost
```

## **STEP-2:Create SNS Topics and SQS Queues**

### **1.Create SNS Topics:**

```
aws --endpoint-url=http://localhost:4566 sns create-topic --name broadcast-topic  
aws --endpoint-url=http://localhost:4566 sns create-topic --name communication-topic  
aws --endpoint-url=http://localhost:4566 sns create-topic --name entity-topic
```

### **2.Create SQS Queues:**

```
aws --endpoint-url=http://localhost:4566 sqs create-queue --queue-name broadcast-queue  
aws --endpoint-url=http://localhost:4566 sqs create-queue --queue-name email-queue  
aws --endpoint-url=http://localhost:4566 sqs create-queue --queue-name sms-queue  
aws --endpoint-url=http://localhost:4566 sqs create-queue --queue-name entity-queue
```

### **3.Subscribe SQS Queues to SNS Topics:**

```
aws --endpoint-url=http://localhost:4566 sns subscribe --topic-arn  
arn:aws:sns:us-east-1:000000000000:broadcast-topic --protocol sqs --notification-endpoint  
arn:aws:sqs:us-east-1:000000000000:broadcast-queue  
aws --endpoint-url=http://localhost:4566 sns subscribe --topic-arn  
arn:aws:sns:us-east-1:000000000000:communication-topic --protocol sqs --notification-endpoint  
arn:aws:sqs:us-east-1:000000000000:email-queue  
aws --endpoint-url=http://localhost:4566 sns subscribe --topic-arn  
arn:aws:sns:us-east-1:000000000000:communication-topic --protocol sqs --notification-endpoint  
arn:aws:sqs:us-east-1:000000000000:sms-queue  
aws --endpoint-url=http://localhost:4566 sns subscribe --topic-arn  
arn:aws:sns:us-east-1:000000000000:entity-topic --protocol sqs --notification-endpoint  
arn:aws:sqs:us-east-1:000000000000:entity-queue
```

```

islavathyoginadh@Islavaths-MacBook-Pro ~ % aws --endpoint-url=http://localhost:4566 sns create-topic --name broadcast-topic
aws --endpoint-url=http://localhost:4566 sns create-topic --name communication-topic
aws --endpoint-url=http://localhost:4566 sns create-topic --name entity-topic

{
  "TopicArn": "arn:aws:sns:us-east-1:000000000000:broadcast-topic"
}
{
  "TopicArn": "arn:aws:sns:us-east-1:000000000000:communication-topic"
}
{
  "TopicArn": "arn:aws:sns:us-east-1:000000000000:entity-topic"
}
islavathyoginadh@Islavaths-MacBook-Pro ~ % aws --endpoint-url=http://localhost:4566 sqs create-queue --queue-name broadcast-queue
aws --endpoint-url=http://localhost:4566 sqs create-queue --queue-name email-queue
aws --endpoint-url=http://localhost:4566 sqs create-queue --queue-name sms-queue
aws --endpoint-url=http://localhost:4566 sqs create-queue --queue-name entity-queue

{
  "QueueUrl": "http://sqs.us-east-1.localhost.localstack.cloud:4566/000000000000/broadcast-queue"
}
{
  "QueueUrl": "http://sqs.us-east-1.localhost.localstack.cloud:4566/000000000000/email-queue"
}
{
  "QueueUrl": "http://sqs.us-east-1.localhost.localstack.cloud:4566/000000000000/sms-queue"
}
{
  "QueueUrl": "http://sqs.us-east-1.localhost.localstack.cloud:4566/000000000000/entity-queue"
}
islavathyoginadh@Islavaths-MacBook-Pro ~ % aws --endpoint-url=http://localhost:4566 sns subscribe --topic-arn arn:aws:sns:us-east-1:000000000000:broadcast-topic --protocol sqs --notification-endpoint arn:aws:sqs:us-east-1:000000000000:broadcast-queue
aws --endpoint-url=http://localhost:4566 sns subscribe --topic-arn arn:aws:sns:us-east-1:000000000000:communication-topic --protocol sqs --notification-endpoint arn:aws:sqs:us-east-1:000000000000:email-queue
aws --endpoint-url=http://localhost:4566 sns subscribe --topic-arn arn:aws:sns:us-east-1:000000000000:communication-topic --protocol sqs --notification-endpoint arn:aws:sqs:us-east-1:000000000000:sms-queue
aws --endpoint-url=http://localhost:4566 sns subscribe --topic-arn arn:aws:sns:us-east-1:000000000000:entity-topic --protocol sqs --notification-endpoint arn:aws:sqs:us-east-1:000000000000:entity-queue

{
  "SubscriptionArn": "arn:aws:sns:us-east-1:000000000000:broadcast-topic:f1749249-1765-4959-9738-a357383e8168"
}
{
  "SubscriptionArn": "arn:aws:sns:us-east-1:000000000000:communication-topic:f0db6487-13d2-42e9-91cb-cae74285c524"
}
{
  "SubscriptionArn": "arn:aws:sns:us-east-1:000000000000:communication-topic:15139d77-89db-4fec-83e4-8c258d56d79b"
}
{
  "SubscriptionArn": "arn:aws:sns:us-east-1:000000000000:entity-topic:f263d3ab-a8db-4a62-80af-47bc786b3487"
}

```

### STEP-3:

Run the server: node index.js

```

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

/Users/islavathyoginadh/.zshrc:6: unmatched "
○ islavathyoginadh@Islavaths-MacBook-Pro sns-sqs-api % node index.js

Server is running on port 3000

```

### STEP-4:Test the APIs

**Publish a Message for broadcast Event**

curl -X POST http://localhost:3000/publish -H "Content-Type: application/json" -d '{"message": "Hello World!", "eventType": "broadcast"}'

```

/Users/islavathyoginadh/.zshrc:6: unmatched "
islavathyoginadh@Islavaths-MacBook-Pro sns-sqs-api % curl -X POST http://localhost:3000/publish -H "Content-Type: application/json" -d '{"message": "Hello World!", "eventType": "broadcast"}'

{"$metadata":{"httpStatusCode":200,"attempts":1,"totalRetryDelay":0},"MessageId":"85a3f3b4-6c30-41f9-ab62-4541ffe8de21"}
islavathyoginadh@Islavaths-MacBook-Pro sns-sqs-api %

```

**Publish a Message for communication Event**

curl -X POST http://localhost:3000/publish \
-H "Content-Type: application/json" \
-d '{"message": "Communication message!", "eventType": "communication"}'

**Publish a Message for entity Event**

```
curl http://localhost:3000/consume/entity
```