

### Step 1: Clone the Repository

```
git clone https://github.com/ndeepakprasanth/dapr-eks-pubsub-ready.git
cd dapr-eks-pubsub-ready
```

### Step 2: Set execute permissions

*find . -type f -name '\*.sh' -exec sed -i 's/#!/r\$/' {} \; -exec chmod +x {} \; #If issues while executing on MacOS*

```
chmod +x oneclick.sh
chmod +x test.sh
chmod +x scripts/*.sh
```

### Step 3: One-Click deployment

```
# Replace with your AWS Account ID
ACCOUNT_ID=<Enter_Your_AWS_ACCOUNT_ID>
AWS_PROFILE=<Enter_Your_AWS_Profile> ./oneclick.sh
```

### Step 4: Verify deployment

```
# Check pods (should show 2/2 Ready)
kubectl -n dapr-apps get pods -o wide
# Check services
kubectl -n dapr-apps get svc
# Check Dapr components
kubectl -n dapr-apps get components
```

### Step 5: Test Pub/Sub functionality

```
./test.sh
```

### Step 6: View ECR repositories

```
aws ecr describe-repositories --region us-east-1
```

### Step 7: Clean up when completed

```
./destroy.sh
```

#### 1. Running pods:

```
423946@AMBGB000622 dapr-eks-pubsub-ready % kubectl -n dapr-apps get pods -o wide
NAME                                READY   STATUS    RESTARTS   AGE   IP              NODE                                NOMINATED NODE   READINESS GATES
orderservice-874558c9b-q88hz        2/2     Running   0           4m41s  192.168.47.173  ip-192-168-36-44.ec2.internal      <none>           <none>
productservice-787cc7d9c7-8ztmz     2/2     Running   0           4m41s  192.168.26.113  ip-192-168-13-87.ec2.internal      <none>           <none>
```

#### 2. Services:

```
423946@AMBGB000622 dapr-eks-pubsub-ready % kubectl -n dapr-apps get svc
NAME                                TYPE        CLUSTER-IP      EXTERNAL-IP      PORT(S)                                AGE
orderservice                        ClusterIP    10.100.48.232    <none>            8090/TCP                                48m
orderservice-dapr                   ClusterIP    None             <none>            80/TCP,50001/TCP,50002/TCP,9090/TCP    48m
productservice                      ClusterIP    10.100.230.157  <none>            8080/TCP                                48m
productservice-dapr                 ClusterIP    None             <none>            80/TCP,50001/TCP,50002/TCP,9090/TCP    48m
```

#### 3. Dapr components

```
423946@AMBGB000622 dapr-eks-pubsub-ready % kubectl -n dapr-apps get components
NAME                AGE
snssqs-pubsub       6m15s
```

#### 4. Test Pub/Sub

```
423946@AMBGB000622 dapr-eks-pubsub-ready % ./test.sh | tee FinalOutput.rtf
==> Testing Dapr pub/sub functionality
Publishing test message...
% Total      % Received % Xferd  Average Speed   Time    Time     Time  Current
             Dload  Upload  Total      Spent    Left  Speed
100  132  100    76  100    56   1291    951  --:--:-- --:--:-- --:--:--   2275
{"ok":true,"published":{"orderId":999,"item":"test-laptop","price":1299.99}}pod "test-curl" deleted
==> Verifying delivery in OrderService logs...
Defaulted container "orderservice" out of: orderservice, daprd
Delivery OK: OrderService received the event.

==> OrderService logs:
Defaulted container "orderservice" out of: orderservice, daprd
OrderService listening on 8090
OrderService received event: {"data":{"item":"test-laptop","orderId":999,"price":1299.99},"datacontenttype":"application/json","id":"a220ce1f-f09a-423a-bd44-ec1f9f8e9392","pubsubname":"snssqs-pubsub","source":"productservice","specversion":"1.0","time":"2025-12-23T14:30:25Z","topic":"orders","traceid":"","traceparent":"","tracestate":"","type":"com.dapr.event.sent"}
OrderService received event: {"data":{"item":"test-laptop","orderId":999,"price":1299.99},"datacontenttype":"application/json","id":"9140340d-80ee-4d5f-83d5-c90d80a328ad","pubsubname":"snssqs-pubsub","source":"productservice","specversion":"1.0","time":"2025-12-23T14:46:07Z","topic":"orders","traceid":"","traceparent":"","tracestate":"","type":"com.dapr.event.sent"}

==> Pod status:
NAME                                READY  STATUS   RESTARTS  AGE  IP              NODE
orderservice-76c489798c-9gntr      2/2    Running   0          16m  192.168.22.177  ip-192-168-3-230.
ec2.internal  <none>
productservice-5bd6fb54ff-m4pkk     2/2    Running   0          23m  192.168.41.34   ip-192-168-43-22.
ec2.internal  <none>

==> Services:
NAME                                TYPE        CLUSTER-IP    EXTERNAL-IP  PORT(S)
AGE
orderservice                        ClusterIP    10.100.142.39  <none>        8090/TCP
27m
orderservice-dapr                   ClusterIP    None           <none>        80/TCP,50001/TCP,50002/TCP,9090/TCP
27m
productservice                      ClusterIP    10.100.156.239  <none>        8080/TCP
27m
productservice-dapr                 ClusterIP    None           <none>        80/TCP,50001/TCP,50002/TCP,9090/TCP
27m

==> Dapr components:
NAME                                AGE
snssqs-pubsub                      28m
423946@AMBGB000622 dapr-eks-pubsub-ready %
```

## 5. ECR repositories with pushed images

```
423946@AMBG000622 dapr-eks-pubsub-ready % aws ecr describe-repositories --region us-east-1 --profile Deepak
{
  "repositories": [
    {
      "repositoryArn": "arn:aws:ecr:us-east-1:946248011760:repository/orderservice",
      "registryId": "946248011760",
      "repositoryName": "orderservice",
      "repositoryUri": "946248011760.dkr.ecr.us-east-1.amazonaws.com/orderservice",
      "createdAt": "2025-12-22T11:41:09.817000+00:00",
      "imageTagMutability": "MUTABLE",
      "imageScanningConfiguration": {
        "scanOnPush": false
      },
      "encryptionConfiguration": {
        "encryptionType": "AES256"
      }
    },
    {
      "repositoryArn": "arn:aws:ecr:us-east-1:946248011760:repository/productservice",
      "registryId": "946248011760",
      "repositoryName": "productservice",
      "repositoryUri": "946248011760.dkr.ecr.us-east-1.amazonaws.com/productservice",
      "createdAt": "2025-12-22T11:41:06.238000+00:00",
      "imageTagMutability": "MUTABLE",
      "imageScanningConfiguration": {
        "scanOnPush": false
      },
      "encryptionConfiguration": {
        "encryptionType": "AES256"
      }
    }
  ]
}
423946@AMBG000622 dapr-eks-pubsub-ready %
```

## 6. Bedrock analysis

```
423946@AMBG000622 dapr-eks-pubsub-ready % python3 bedrock.py

=== Bedrock (Titan) Analysis ===

[{'tokenCount': 116, 'outputText': 'snsqs-pubsub 62m\npod "test-curl" deleted\n\nThe logs indicate that the pub/sub test was successful. The OrderService is listening on port 8080, and the Pod status shows that both the OrderService and ProductService are running. The services are exposed externally with ClusterIPs and have the appropriate ports open. The Dapr components, including the SNSQS pub/sub component, are also running.\n\nThere are no errors or warnings in the logs. The pub/sub test was successful.', 'completionReason': 'FINISH'}]
423946@AMBG000622 dapr-eks-pubsub-ready %
```

## 7. Stress test output

```
423946@AMBG000622 dapr-eks-pubsub-ready % echo "=== STRESS TEST DEMONSTRATION ==="
echo "Sending multiple concurrent requests..."
for i in {1..5}; do
  kubectl -n dapr-apps run load-test-$i --restart=Never --image=curliimages/curl:8.10.1 --command -- curl -X POST http://productservice:8080/publish -H 'Content-Type: application/json' -d "{\"orderId\": $i, \"item\": \"load-test-$i\", \"price\": ${RANDOM % 1000}}\" &
done
echo "Waiting for completion..."
sleep 8
echo ""
echo "=== STRESS TEST RESULTS ==="
kubectl -n dapr-apps get pods | grep load-test
echo ""
echo "=== CLEANUP ==="
kubectl -n dapr-apps delete pods -l run --field-selector=status.phase=Succeeded
=== STRESS TEST DEMONSTRATION ===
Sending multiple concurrent requests...
[2] 7386
[3] 7387
[4] 7388
[5] 7389
[6] 7390
Waiting for completion...
pod/load-test-5 created
pod/load-test-4 created
[6] + done kubectl -n dapr-apps run load-test-$i --restart=Never --command -- curl -X
[5] + done kubectl -n dapr-apps run load-test-$i --restart=Never --command -- curl -X
pod/load-test-1 created
[2] done kubectl -n dapr-apps run load-test-$i --restart=Never --command -- curl -X
pod/load-test-3 created
[4] + done kubectl -n dapr-apps run load-test-$i --restart=Never --command -- curl -X
pod/load-test-2 created
[3] + done kubectl -n dapr-apps run load-test-$i --restart=Never --command -- curl -X

=== STRESS TEST RESULTS ===
load-test-1      0/1    Completed    0      8s
load-test-2      0/1    Completed    0      8s
load-test-3      0/1    Completed    0      8s
load-test-4      0/1    Completed    0      8s
load-test-5      0/1    Completed    0      8s

=== CLEANUP ===
pod "load-test-1" deleted
pod "load-test-2" deleted
pod "load-test-3" deleted
pod "load-test-4" deleted
pod "load-test-5" deleted
```

## 8. Logs screenshot:

```
423946@AMBG800622 dapr-eks-pubsub-ready % echo "=== ARCHITECTURE VERIFICATION ==="
echo ""
echo "🚦 EKS Cluster Nodes:"
kubectl get nodes -o wide
echo ""
echo "🚦 Dapr System Pods:"
kubectl -n dapr-system get pods
echo ""
echo "🚦 Application Logs (ProductService):"
kubectl -n dapr-apps logs deploy/productservice --tail=5
echo ""
echo "🚦 Application Logs (OrderService):"
kubectl -n dapr-apps logs deploy/orderservice --tail=5
echo "=== ARCHITECTURE VERIFICATION ==="

🚦 EKS Cluster Nodes:


| NAME                          | CONTAINER-RUNTIME     | STATUS | ROLES  | AGE  | VERSION             | INTERNAL-IP   | EXTERNAL-IP    | OS-IMAGE                     | KERNEL-VERSION                  |
|-------------------------------|-----------------------|--------|--------|------|---------------------|---------------|----------------|------------------------------|---------------------------------|
| ip-192-168-13-87.ec2.internal | 64 containerd://2.1.5 | Ready  | <none> | 164m | v1.32.9-eks-ecaa3a6 | 192.168.13.87 | 100.49.41.36   | Amazon Linux 2023.9.20251208 | 6.1.158-180.294.amzn2023.x86_64 |
| ip-192-168-36-44.ec2.internal | 64 containerd://2.1.5 | Ready  | <none> | 164m | v1.32.9-eks-ecaa3a6 | 192.168.36.44 | 54.196.115.105 | Amazon Linux 2023.9.20251208 | 6.1.158-180.294.amzn2023.x86_64 |



🚦 Dapr System Pods:


| NAME                                   | READY | STATUS  | RESTARTS | AGE  |
|----------------------------------------|-------|---------|----------|------|
| dapr-operator-69845db889-4bmp6         | 1/1   | Running | 0        | 162m |
| dapr-placement-server-0                | 1/1   | Running | 0        | 162m |
| dapr-scheduler-server-0                | 1/1   | Running | 0        | 162m |
| dapr-scheduler-server-1                | 1/1   | Running | 0        | 162m |
| dapr-scheduler-server-2                | 1/1   | Running | 0        | 162m |
| dapr-sentry-78f477df9c-wvg7p           | 1/1   | Running | 0        | 162m |
| dapr-sidecar-injector-6f774f9bfc-c54cw | 1/1   | Running | 0        | 162m |



🚦 Application Logs (ProductService):
Defaulted container "productservice" out of: productservice, daprd
metadata: [Object],
reason: 'DAPR_PUBSUB_PUBLISH_MESSAGE'
}
}

🚦 Application Logs (OrderService):
Defaulted container "orderservice" out of: orderservice, daprd
OrderService listening on 8090
```