
AWS
re:Invent
NOV. 28 – DEC. 2, 2022 | LAS VEGAS, NV

CMP003

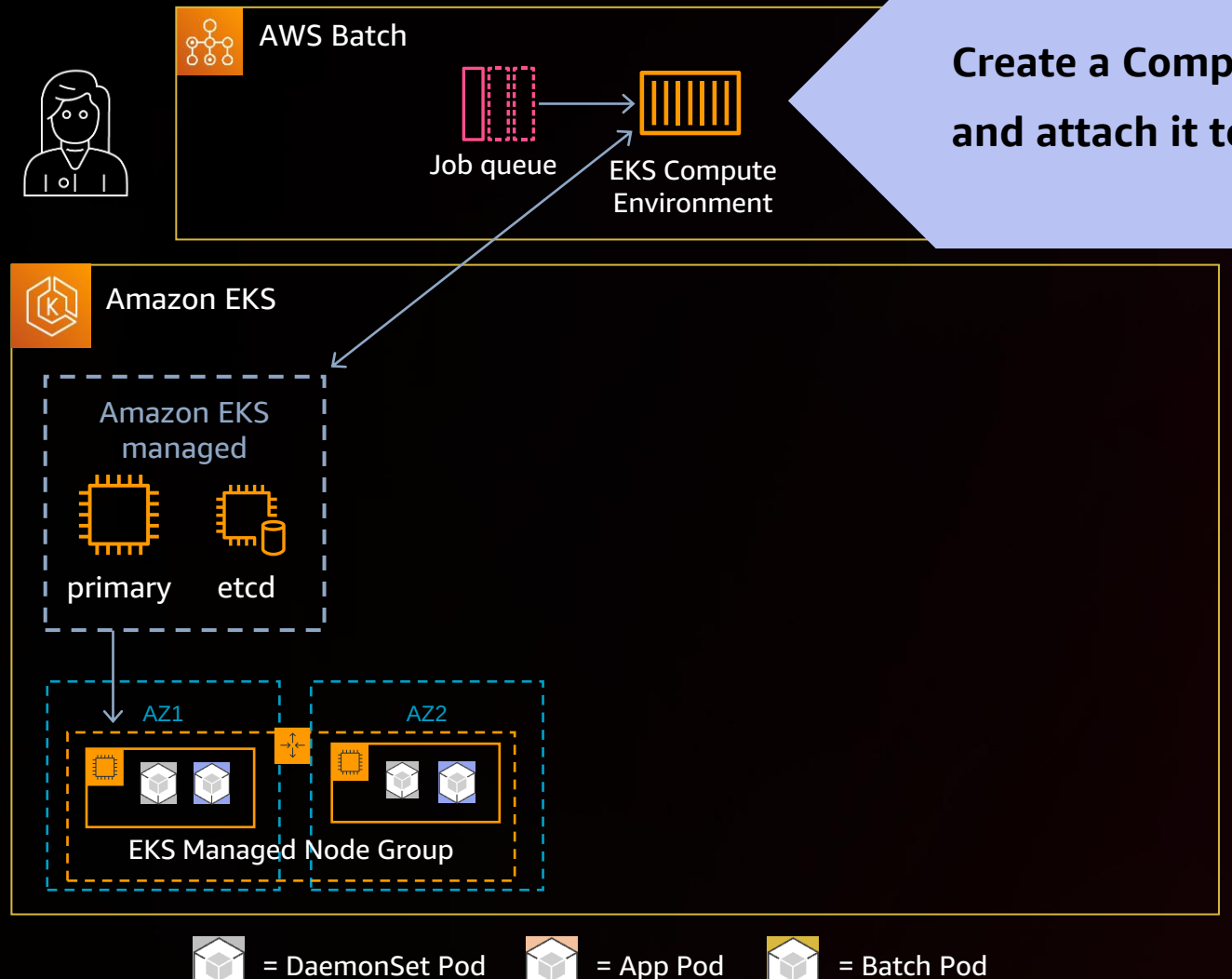
Running batch workloads on Amazon EKS with AWS Batch

Angel Pizarro (he/him)

Principal Developer Advocate
AWS

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

AWS Batch for EKS – how it works

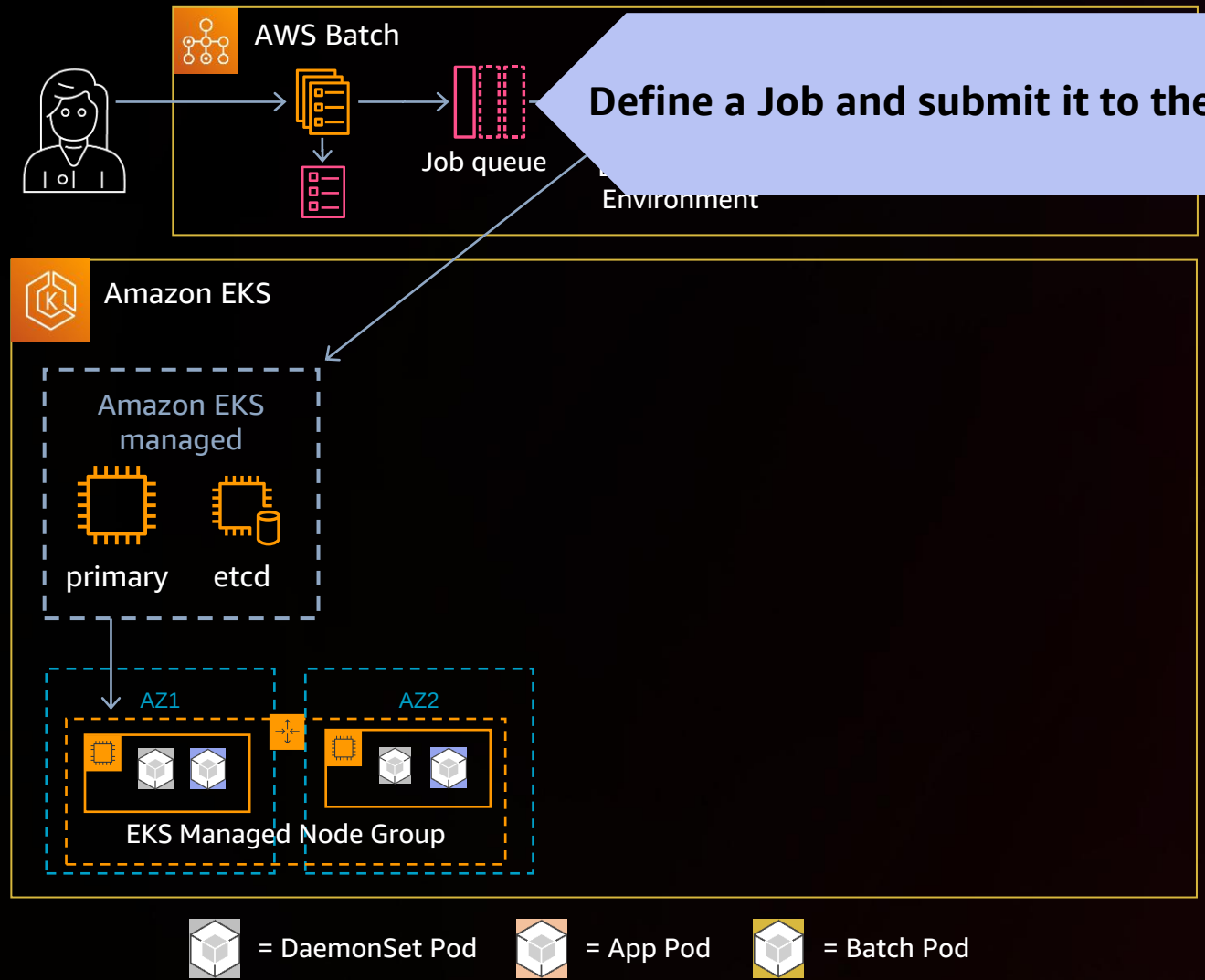


Create a Compute Environment, Job Queue, and attach it to an EKS Cluster.

```
{
  "computeEnvironmentName": "batch4eks-[redacted]-CE1",
  "type": "MANAGED",
  "state": "ENABLED",
  "eksConfiguration": {
    "eksClusterArn": "arn:aws:eks:us-east-1:[redacted] cluster/batch4eks
      -[redacted]",
    "kubernetesNamespace": "batch4eks-8[redacted]-batch-nodes"
  },
  "computeResources": {
    "type": "EC2",
    "allocationStrategy": "BEST_FIT_PROGRESSIVE",
    "minvCpus": 0,
    "maxvCpus": 32,
    "instanceTypes": [
        "m5"
    ],
    "subnets": [
        "subnet-0[redacted]",
        "subnet-0[redacted]",
        "subnet-0[redacted]"
    ],
    "securityGroupIds": [
        "sg-[redacted]b"
    ],
    "instanceRole": "arn:aws:iam::[redacted]:instance-profile/eks-02c1c74a
      -78bf-[redacted]"
  },
  "serviceRole": "AWSBatchRoleWithEKS-[redacted]"
}
```

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

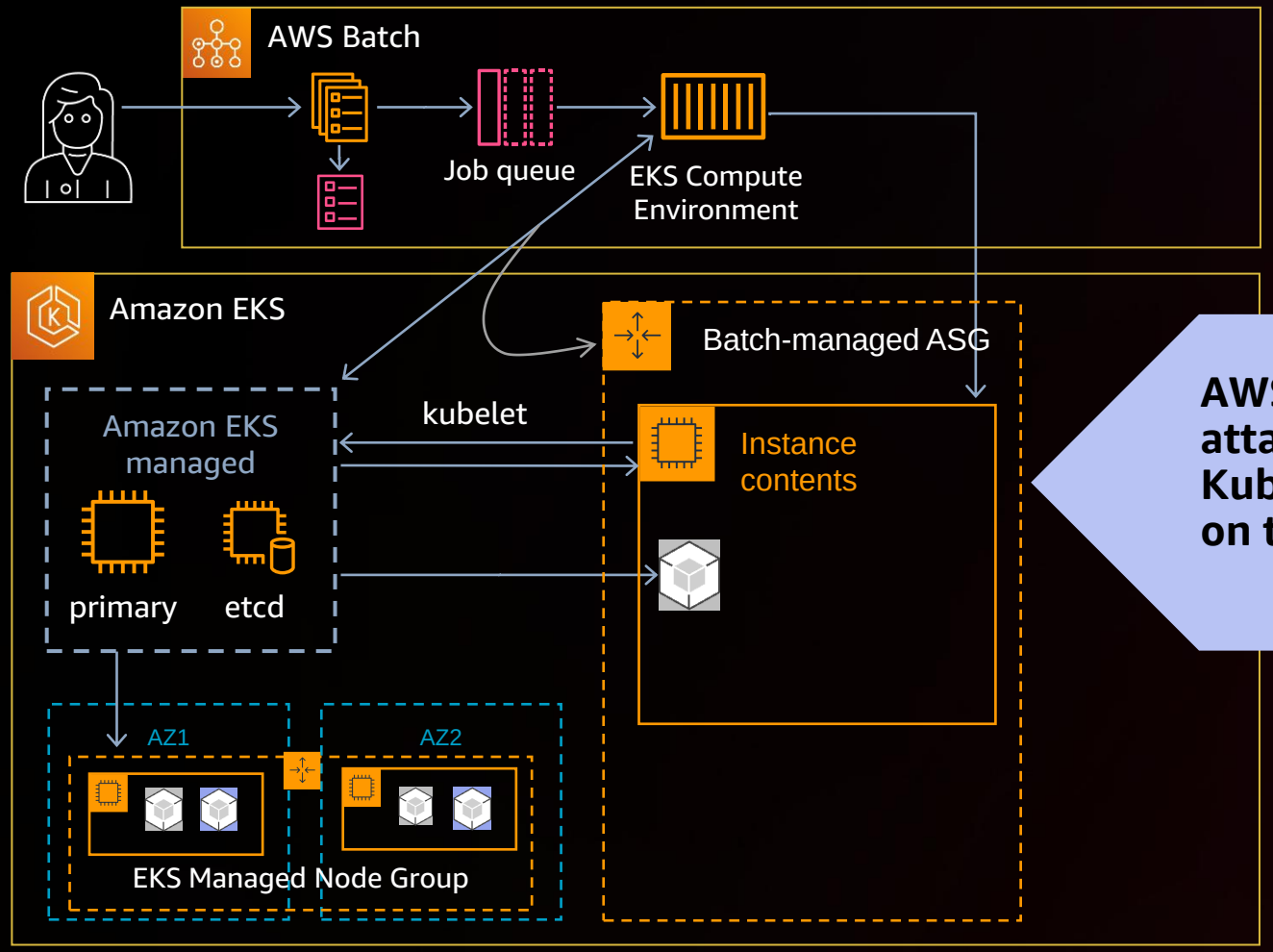
AWS Batch for EKS – a closer look




```
{
    "jobDefinitionName": "",
    "type": "container",
    "eksProperties": {
        "podProperties": {
            "serviceAccountName": "myBatchEksServiceAccount",
            "hostNetwork": true,
            "containers": [
                {
                    "image": "public.ecr.aws/amazonlinux/amazonlinux:2",
                    "command": [
                        "echo",
                        "Hello KubeCon!"
                    ],
                    "resources": {
                        "limits": {
                            "cpu": "1",
                            "memory": "1024Mi"
                        }
                    "volumeMounts": [...],
                    "securityContext": {...}
                }
            ],
            "volumes": [...]
        }
    }
    "retryStrategy": {...},
    "propagateTags": true,
```

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

AWS Batch for EKS – a closer look



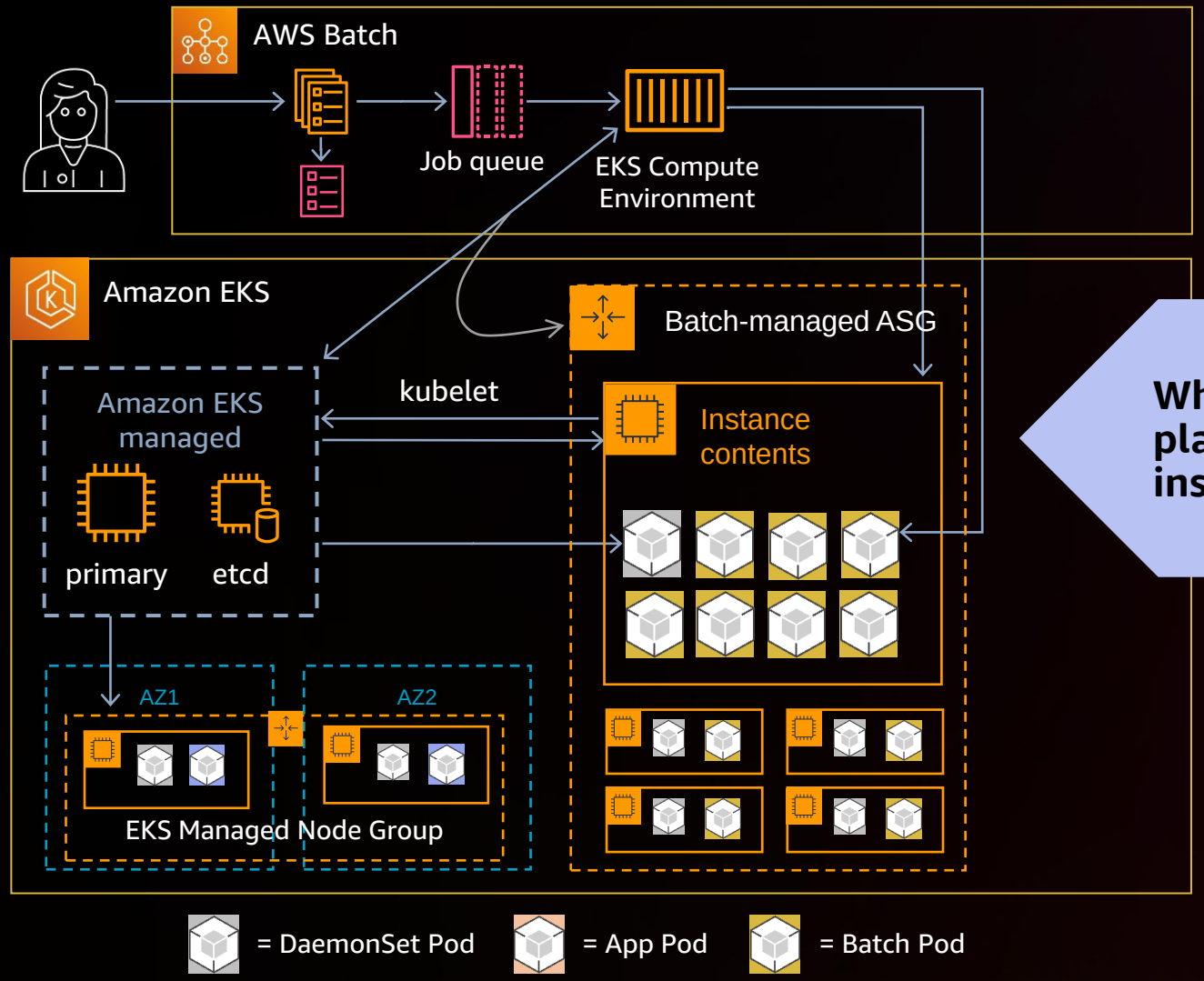
AWS Batch launches instances and attaches them to the cluster. The Kubernetes scheduler places DaemonSets on the node.

```
tolerations:
- key: "batch.amazonaws.com/batch-node"
  operator: "Exists"
```

= DaemonSet Pod = App Pod = Batch Pod

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

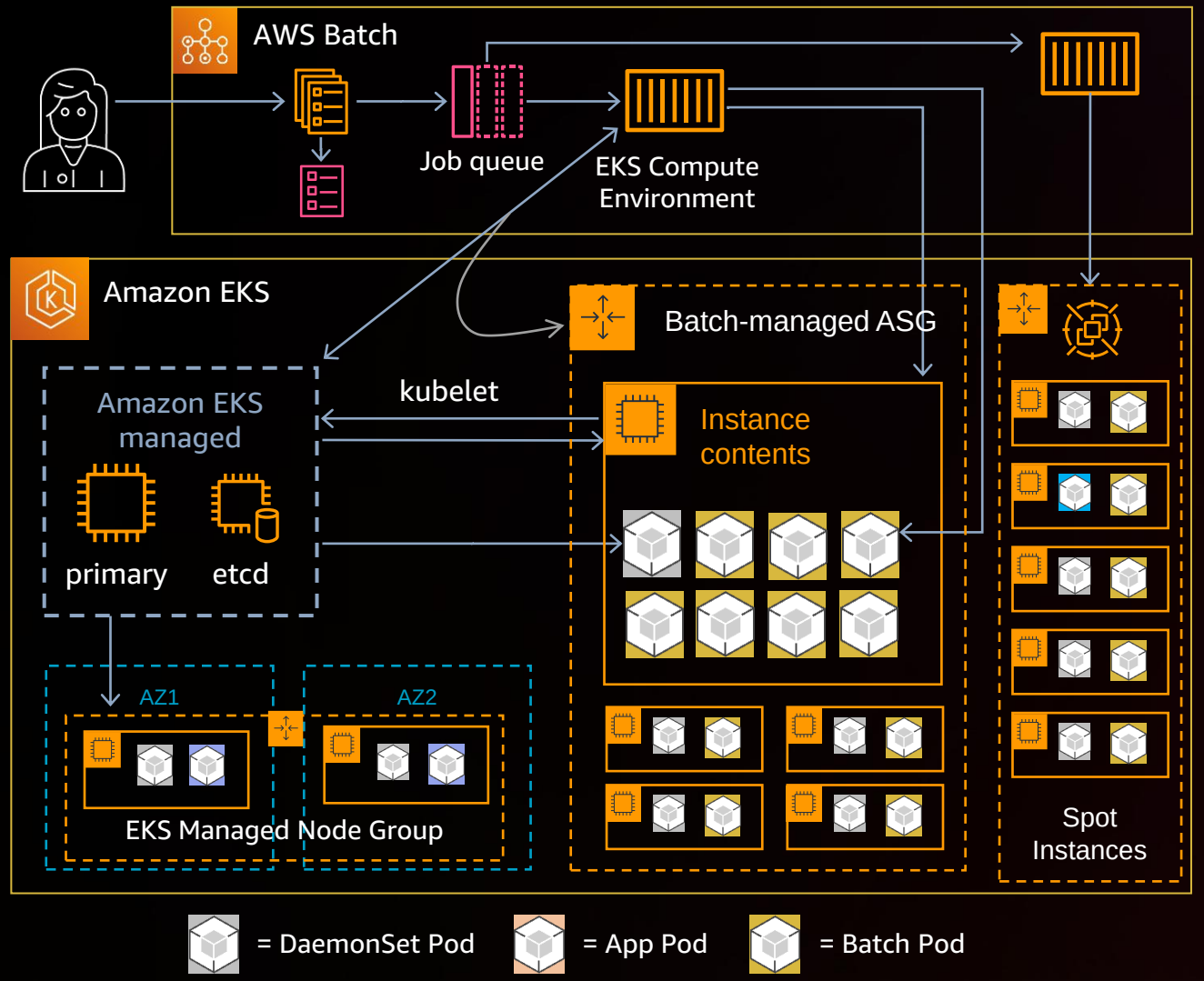
AWS Batch for EKS – a closer look



When the node is ready, AWS Batch starts placing pods on the node. It will launch more instance as needed.

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

AWS Batch for EKS – a closer look



Additional CEs can be attached to the same JQ.

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Thank you!



Please complete the session survey in the **mobile app**

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.