**EKS Kubernetes**

AWS EKS service provides the Kubernetes control plane. Price for EKS Service is $0.20 per hour / cluster.

**EKS Use Case Monthly Cost**

Three clusters with four worker nodes.

1. EKS Service
   1. **((0.20 \* 24 \* 365)/12) = $146/month per cluster**
   2. **3 clusters = $438/month**
2. Kubernetes Node costs
   1. On-demand Cost
      * **m5.xlarge 4 cpu 16 GiB x 4 = 16 cpu 64 GB**
        1. ((0.192 \*24 \*365)/12) = **$140.16/month per node**
        2. Total = **$560.64 4 nodes**
        3. Clusters x 3 = **$560.64 x 3** = **$1681.92**
   2. Spot Instances (Example uses us-west-2 spot instance prices)
      * **m5.xlarge 4 cpu 16 GiB x 4 = 16 cpu 64 GB**
        1. ((0.068 \* 24 \* 365)/12 = **$49.64/month**
        2. Total = $198.56 4 nodes
        3. Clusters x 3 = $198.56 x3 = **$595.68**

**EC2 Kubernetes**

The cost of EC2 is reflected in the Node costs. The control plane distributed across an odd number of node instances(odd number for quorum).

1. Kubernetes Node costs
   * On-demand Cost
     + **m5.xlarge 4 cpu 16 GiB x 4 = 16 cpu 64 GB**
       1. ((0.192 \*24 \*365)/12) = **$140.16/month per node**
       2. Total = $560.64 4 nodes
       3. Clusters x 3 = $560.64 x3 = **$1681.92**
   * Spot Instances (Example uses us-west-2 spot instance prices)
     + **m5.xlarge 4 cpu 16 GiB x 4 = 16 cpu 64 GB**
       1. ((0.068 \* 24 \* 365)/12 = **$49.64/month**
       2. Total = $198.56 4 nodes
       3. Clusters x 3 = $198.56 x3 = **$595.68**

**Summary**

The main difference in cost is the set costs of the EKS cluster. In our use case above we have three clusters which is an additional $438/month.

1. EKS Use Case Summary
   1. On-demand: 3 cluster = **$438 + $1681.92 = $2119.92 ($706.64/cluster)**
   2. Spot: 3 clusters = **$438 + $595.68 = $1033.68 ($344.56/cluster)**
2. EC2
   1. On-demand: 3 clusters = **$1681.92 ($560.64/cluster)**
   2. Spot: 3 clusters = **$595.68 ($198.56/cluster)**