b'

Amazon Web Services \xe2\x80\x93 Introduction to Amazon EKS

- Last Updated :\n11 Mar, 2022

Amazon Elastic Kubernetes Service(ECS), is a fully managed service that you can use to run **Kubernetes** on Amazon Web Service. *Kubernetes* is open-source software that enables you to install and manage applications at a high scale.\xc2\xa0

Its characteristics are:

- **Availability**: In order to ensure high availability Kubernetes executes and scales itself to various AWS AZs.
- **Strength**: Kubernetes automatically scales itself to avoid loads and unwanted control plane issues.
- **Scalability**: It also works with various AWS services to provide security in applications.
    - Amazon ECR for container images
    - Elastic Load Balancing for load classification.

AWS Fargate: It is a serverless compute engine for containers. It works with *Amazon EKS \xc2\xa0or Amazon ECS.*

Amazon EKS Sections :

Amazon EKS organization contains the following sections: clusters, nodes, and networking.

1. **Clusters \xe2\x80\x93** Clusters are consists of the control plane and EKS nodes.
2. **EKS nodes** \xe2\x80\x93 Kubernetes nodes run with EC2 in your organization\xe2\x80\x99s account of amazon web service. Each cluster is defined by a unique certificate to schedule portable storage using three ways:
    - Self-Managed Nodes
    - Managed Node Groups
    - Amazon Fargate
3. **Amazon EKS Networking**-EKS operates in a Virtual Private Cloud (VPC) so that it can activate all resources to an existing subnet in a network.

Advantages of AWS EKS :

Following are the advantages of using Amazon EKS:

1. EKS automates load distribution and parallel processing better than any DevOps engineer could.
2. EKS uses VPC networking (explained above).
3. Supports EC2 spot examples using managed node groups that follow best practices.
4. Your Kubernetes assets integrate smoothly with AWS services if you use EKS.
5. EKS allows you to run tools easily.

Amazon EKS Control Plane Architecture:\xc2\xa0

Each cluster runs only one Kubernetes control plane. The control plane mainly consists of two API servers and three \xe2\x80\x98*etcd*\xe2\x80\x98(The *etcd* is used for storing Kubernetes data). It manages the scalability of load to have high performance. It identifies the unwanted part of the control plane and can remove it. The control plane can\xe2\x80\x99t be accessed by any other AWS accounts or clusters except for the authorized user.

Working of Amazon EKS:\xc2\xa0

- Firstly, create an Amazon EKS cluster in the console.
- Now launch the EKS nodes and placed all the workloads on AWS Fargate.
- After your cluster is ready, the user can easily communicate by using different types of tools.
- Users can now manage the workloads over Kubernetes.

Pricing of EKS:\xc2\xa0

The user can pay for both long-term service and short-term service. Long-term is a little bit cheaper than the other one because it set a commitment from 1-3 years.

My Personal Notes\narrow_drop_up

Add your personal notes her

Save

'