NOTE Full Diagram with expected budget can be validated here :

<https://app.cloudcraft.co/view/5ec60114-d3f1-4798-8189-7f6fdc21e88e?key=e97686d2-c26e-4ede-994a-96f4ef7b63d7>

# LMS Platform Architecture Diagram Details for AWS Implementation

PART 1 Cloud and Networking

1. Create a VPC Named LMS-VPC
2. Create 1 Subnet named priv-subnet-01
   1. Create a Security Group named EKS Admins
   2. Create a EKS Cluster to perform helm chart setup for moodle with K8S
      1. Bitnami chart could be used, just require reconfig to MySQL instead of MariaDB Ex : <https://bitnami.com/stack/moodle/helm>
   3. High Availability K8S Definition
      1. Find in repo folder ‘Diagrams as Code for k8s’ (here is the config for high availability)

PART 2 - Database and Storage

1. Create a subnet named priv-subnet-01
2. Create a Security Group named Database-Admins
3. Create a RDS Aurora with Mysql
4. Create a S3 bucket and configure a raw storage
5. Configure Moodle to connect to mysql instance

PART 3 – Site Reliability Engineer

1. Configure Cloudwatch to monitor All the components on LMS-VPC
2. Create a AWS Grafana managed service
3. Create a dashboard on Grafana focused on Monitor EKS status, Database Transactions, Networking Errors

PART 4 – Expose

1. Create a NatGateway to expose priv-subnet-01
2. Create a Apigateway to receive an static ip and application Static IP Adress
3. Create a Route53 component and reserve your own domain name
4. Create a new Record on Route53 targeting to the api gateway
5. Conect your api gateway to the NatGatway component
6. Let your users know that they can access to the new great learning platform on [www.mydomainlms.co](http://www.mydomainlms.co)