**Project Proposal**

**Demonstration of highly available and scalable system using Amazon Web Services Auto Scaling Groups.**

Organizations these days are focused on developing systems that are elastic, scalable and highly available. This is because the competition is fierce in the market and any downtime in service can lead to loss of business.

Amazon Web Services Auto Scaling Group can help in developing enterprise level highly available, scalable and robust systems. The resources provisioned are on demand basis hence customer only pays what he uses. Now there is no need to perform any future resource planning as resources can be automatically provisioned according to the system load and business requirements.

An Auto Scaling group contains a collection of EC2 instances that share similar characteristics and are treated as a logical grouping for the purposes of instance scaling and management. For example, if a single application operates across multiple instances, you might want to increase the number of instances in that group to improve the performance of the application, or decrease the number of instances to reduce costs when demand is low. You can use the Auto Scaling group to scale the number of instances automatically based on criteria that you specify, or maintain a fixed number of instances even if an instance becomes unhealthy. This automatic scaling and maintaining the number of instances in an Auto Scaling group is the core functionality of the Auto Scaling service.

**Project Activities**:

* Host some Linux servers on AWS and configure them with an auto-scaling group.
* Setup launch configurations to let system know the specifications of the new servers to be launched on demand basis.
* Set up system parameters and triggers for automatic resource provisioning.
* Perform stress test on the servers to trigger auto scaling on the system to meet the load requirements.
* Monitor CPU utilization of the servers using AWS Cloudwatch and make sure system scales up and down as per the parameter threshold set during the setting up auto scaling policies.