

Introduction::

This document details the implementation works of a Mybb Site via cloud formation template. This MyBB is site required to be scalable, high available and good security.

Requirements:

- 1- EC2 Key Pair for the region that you are deploying your stack. And please remember the key name for the parameters of the template.
- 2- AWS Account
- 3- The deployment is conducting 2 download operations:
 - a) Source Code of MyBB
 - b) Sample Config Files & Install Script
<https://github.com/mybb/mybb/tarball/master>
<https://github.com/servetguney/mbbw/tarball/master>

How to Deploy:

- 1- Login to AWS Console
- 2- Create the stack with the template.
- 3- Wait (it takes time)
- 4- Check the site with the loadbalancer dns name as result.

Design:

The EC2 Instance Family: t,c,m3
The Database Instance Family: t,r,m3
Database Type: MySQL
The Naming Schema: Every logical word has been capitalized in name of the source. Example: DatabaseName, InstanceLaunchConfig...etc
2 layers of security via both security access groups and networkacl's
Subnets: The 10.10.{2,4,6,8}x.0/24 networks are reserved for public use
10.10.{3,5,7,9}x.0/24 networks are reserved for private use for future improvements.
Lower cost focused design.

Whats Left:

- Tags: Much better tags for explanatory & fix the absents)
- Logs: There should be logging enabled for the instances & connections to S3.
- More Alarms: There should be more complex & extensive alarms in the stack.
- Media Files: MyBB media files should be stored on S3 Bucket (with scheduled backups)
- High Availability: MyBB is now MultiAZ but only 2 AZ. Needs improvement for cross region & all AZ of the region if more than 2.
- The DB size control: There is no control or adding storage for the DB now.
- HTTPS: Change site to HTTPS based web host.
- Domain DNS: Needs to define domain dns records for production use.
- Unmap Gateway IP before deleting the VPC (else it gives error about deleting failure)

Resources:

Web Servers:

There will be minimum 2 web servers. They will scale up to 5 and can be down again till 2 (1 by 1). There scaling up & down rules. There is related autoscaling group defined.

Vertical Scaling : needs downtime & change instance resources.

DB Servers:

There is 1 DB with MultiAZ feature enabled. There is only 1 replica.
Vertical Scaling : needs downtime & add instance resources.
Horizontal Scaling: Migrate to Aurora DB Cluster

Load Balancer: There is a load balancer that distributing the requests to webserver. There is custom launch configuration attached for installations and configurations based on cfn-init & metadata.

Alarms:

Scaling down and up alarms has been defined.

Problem:

Unfortunately, I didn't have time to troubleshoot the network problem that causing connection problems, and leading unsuccessful site deployment.

High Level Design:

