# Introduction :

This solution creates WordPress application, MYSQL RDS instance. They are created inside VPC with 2 public and 2 private, 2 security groups one for front end servers and the other for securing the database, load balancer to distribute the web traffic between 2 ec2 instance. Those instance created inside Autoscaling group for high availability

# Assumptions :

1. Before you run the scripts you have to create iam server certificated and upload it to aws.
2. Scripts must be executed from with cli folder.
3. SSH Key pair must be named *candidate8stack* or you must rename it and change it’s value in webserverstack.sh.

# Certificate Creation steps:

Below steps must be done before you run ntdbstack.sh, you should update CertificateArn variable inside mention script with the ARN from certificate creation

$ openssl genrsa 2048 > myprivatekey.pem

$ openssl req -new -x509 -nodes -sha256 -days 365 -key myprivatekey.pem -outform PEM -out mycertificate.pem

$ aws iam upload-server-certificate --server-certificate-name candidate8certificate --certificate-body file://mycertificate.pem --private-key <file://myprivatekey.pem>

# File Descriptions

## candidate8userdata.txt:

The actual user data file to be used by launch configuration.

## networkscripts.log :

Log file contains all information related to ntdbstack.sh script

## ntdbstack.sh:

Must be run after certificate creation and it should be updated with new arn value before execution. This file created Network infrastructure plus database, it creates VPC, Subnets, Security Groups, Load Balancer and associated security groups, RDS and associated groups and finally it updates candidate8userdata.txt file to be used in the second script.

readJson.py

## readJson.py:

I used this file to read json arrays return by aws cli to retrieve network and security groups values created by ntdbstack.sh. It is used heavily in webserverstack.sh script. It take 3 paramters ,the root json document, the element you need to retrieve plus the tags name.

## stackcleanupscript.sh and stackcleanupwebserver.sh:

Contains all statement to delete the stack ,it include aws cli command plus the exact item id/ name .

## Result.json :

Temp file used by readJson.py script to manipulate json results

## Userdatatemplate.txt:

This file to generate user data template for the launch-configuration creation.

## Webserverstack.sh:

The second the must be run after ntdbstack.sh, this script creates Launch configuration, Autoscaling group and update candidate8userdata.txt with RDS endpoint address.

## Webserver.log :

Log file for webserverstack.sh script

