

To deploy 500LAMP systems, AWS has a functionality called Cloud Formation

Step 1:

Create a AWS CloudFormation Template Eg: CLOUDFORMATION.yaml

And paste the following code:

Resources:

MyEC2Instance:

Type: AWS::EC2::Instance

Properties:

ImageId: ami-xxxxxxxxxxxxxxxxx # Choose an appropriate AMI

InstanceType: t2.micro

KeyName: your-key-pair

SecurityGroupIds:

- sg-xxxxxxxxxxxxxxxxx # Specify your security group

UserData:

Fn::Base64: |

#!/bin/bash

yum update -y

yum install -y httpd mariadb-server php php-mysqlnd

systemctl start httpd

systemctl start mariadb

systemctl enable httpd

systemctl enable mariadb

Step 2:

Launch EC2 Instances with AWS CloudFormation:

Use the AWS CLI to create a CloudFormation stack:

```
aws cloudformation create-stack --stack-name lamp-stack --template-body  
file:///lamp-stack.yaml --capabilities CAPABILITY_IAM
```

Monitor Stack Creation:

Monitor the CloudFormation stack creation progress using the AWS CLI:

```
aws cloudformation describe-stacks --stack-name lamp-stack
```

Scale Resources:

To create 500 instances, adjust the Count property in your CloudFormation template or create multiple stacks.

Configuration Management (Optional):

If additional configuration is needed on the instances, consider using a configuration management tool like Ansible. Write an Ansible playbook that installs and configures the LAMP stack.

Example Ansible playbook (lamp-setup.yml):

```
---
- name: Configure LAMP Stack
  hosts: all
  become: true
  tasks:
    - name: Install Apache, MySQL, PHP
      yum:
        name: "{{ item }}"
        state: present
      with_items:
        - httpd
        - mariadb-server
        - php
        - php-mysqlnd
    - name: Start and enable services
      systemd:
        name: "{{ item }}"
        state: started
        enabled: yes
      with_items:
        - httpd
        - mariadb
```

Run the Ansible playbook:

```
ansible-playbook -i "your-ec2-ip-address," -u ec2-user -b lamp-setup.yml
```