**###PROJECT####**

**Project Task: Deployment of Vagrant Ubuntu Cluster with LAMP Stack**

Objective:

1. **Develop a bash script to orchestrate the automated deployment**

of two Vagrant-based Ubuntu systems, designated as 'Master' and 'Slave', with an integrated LAMP stack on both systems.

Specifications:

**2. Infrastructure Configuration:**

Deploy two Ubuntu systems:

Master Node: This node should be capable of acting as a control system.

Slave Node: This node will be managed by the Master node.

**3.** **User Management:**

On the Master node:

Create a user named altschool.

Grant altschool user root (superuser) privileges.

**4.** **Inter-node Communication:**

Enable SSH key-based authentication:

The Master node (altschool user) should seamlessly SSH into the Slave node without requiring a password.

**5. Data Management and Transfer:**

On initiation:

Copy the contents of /mnt/altschool directory from the Master node to /mnt/altschool/slave on the Slave node. This operation should be performed using the altschool user from the Master node.

**6.** **Process Monitoring:**

The Master node should display an overview of the Linux process management, showcasing currently running processes.

**7. LAMP Stack Deployment:**

Install a AMP (Apache, MySQL, PHP) stack on both nodes:

Ensure Apache is running and set to start on boot.

Secure the MySQL installation and initialize it with a default user and password.

Validate PHP functionality with Apache.

**Deliverables:**

1. A bash script encapsulating the entire deployment process

adhering to the specifications mentioned above.

1. Documentation accompanying the script,

elucidating the steps and procedures for execution.

1. A test PHP page validating the LAMP setup on both nodes
2. A Load balancer using nginx to allow for traffic to the LAMP using the master

and the slave nodes.