System Engineer – Homework

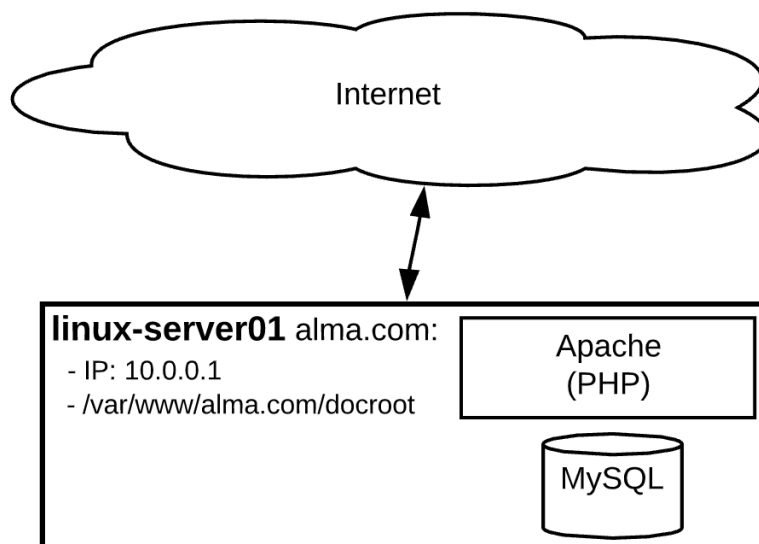Thanks for handing in your application to a System Engineer position at Emarsys.

With the first mandatory exercise, we would like to assess your skills on how you can manage basic Linux hosts with modern approaches and with the second extra exercise your thoughts on extending a host to a highly available solution.

Mandatory Exercise: Create a configuration management solution that configures linux-server01, based on what is shown in the image

Rules:
- You have 24 hours to submit your solution
- You can submit your solution even if you have not finished it fully
- You can use any configuration management tool or approaches
- The solution should run on the latest release of the CentOS Linux distribution
- alma.com must only be resolved locally
- linux-server01, should run the following PHP script when a request arrives to http://alma.com.

```php
<?php
$link = mysql_connect('localhost', 'user', 'password');
if (!$link) {
    die('Could not connect: ' . mysql_error());
}
echo 'Alma.com served successfully';
mysql_close($link);?>
```

Additional Exercise: Please create a plan about what type of layers you would introduce, if alma.com is a domain that will be reached from the Internet by millions of people.

Rules:
- Layer in the current context means one server or a group of servers that provides similar or same functionalities.
- The plan should not be more than two pages
- The plan can contain any form of description (e.g: text, diagrams, mind maps)
- The domain should expect high traffic
- There are several good solutions for this exercise, so don't stress over it. It can be a good starting point for a discussion on the interview.