**Below is the written test for Bongo’s Site Reliability Engineer position. Please read through the entire test before starting to write it.**

Q. Certain web pages are loading slow in user’s browser for our live web application. What steps will you take to resolve the issue?

**Answer:**

1. Enable proxy
2. Increase the number of HTTP Requests.
3. Check the resource utilization, CPU, RAM
4. Stop the unnecessary services.

Q. Imagine a scenario where a web application is serving from a single web server to the internet. What are the problems in this scenario? Design and architect a solution that will mitigate these problems? Or How would you design a scalable architecture with resiliency in mind for the following situations:

a. if a service is resource intensive b. a service needs to be low latency c. if parts of a service need to be restricted to certain geographical boundaries

**Answer:**

1. Multiple redundant servers in different locations.
2. Redundant high speed internet connectivity
3. Specific routing for different geographical location
4. Balancing loads or traffic in multiple servers
5. Reliable and distributed storage

Q. Currently there’s no monitoring in place for the above single web server. How and what application will you use to monitor the resources/process in your new design?

**Answer:** With SNMP we can monitor the server by using the below applications

**Open Source**

* Cacti
* Nagios
* Zabbix

Enterprise graded source

* SolarWinds Orion
* Manage engine

Q. In our server we want to create a user who can only view logs using `less` from this path /var/log. Please explain how to achieve this.

**Answer:** Firstly, we need to create a new user (ex: monjur) with no other administrative privileges. The use setfacl command and give the r access

sudo setfacl -m u:monjur:r /var/logs

Q. Explain how you can ssh into a private server from the internet.

**Answer:** Using VPN

Q. Write a bash function that will find all occurrences of an IPv4 from a given file.

**Answer:** grep -o -E [0-9]+\.[0-9]+\.[0-9]+\.[0-9]+(:[0-9]+)? ip\_traffic-1.log > ips.txt

Q. Share with us a steps to run a web service container on 80 port.

1. Install Docker
2. Set up Apache Container and copy the html file in document root directory
3. Allow port 80 from outside.
4. Start Apache Container

**Submission:**

1) Implement solution for these problems. 2) Upload to github/bitbucket or any other code sharing platform. 3) Send an email to [al.emran@bongobd.com](mailto:al.emran@bongobd.com) and & biprajit.saha@bongobd.com with subject “Bongo SRE Test” with your code repository URL in the email body.

If you have any questions, please send mail with a subject line of “Questions on Bongo SRE Test”.