Kafka Engineering Candidate Questionnaire

Problem Solving

The candidate can choose to answer one of the following questions:

**Four Bottles of Milk**

There are four bottles of milk and one is poisonous. For testing you have to feed the milk samples to one sampling AI rat. The AI rat takes 10 hours to process results. Within 24 hours you have to drink 3 bottles of milk else you will die. How will you solve this?

**Four People on a Bridge**

Four people come to a river in the night. There is a narrow bridge, but it can only hold two people at a time. They have one torch and, because it's night, the torch has to be used when crossing the bridge. Person A can cross the bridge in 1 minute, B in 2 minutes, C in 5 minutes, and D in 8 minutes. When two people cross the bridge together, they must move at the slower person's pace. The question is, can they all get across the bridge if the torch lasts only 15 minutes?

Technical

1. What are the differences between Red Hat and Ubuntu?
2. Where are DNS resolvers configured in Red Hat? Ubuntu?
3. Where are IP addresses configured in Red Hat? Ubuntu?
4. How can you install packages on Red Hat? Ubuntu?
5. How can you review a log from the chrony service on RHEL 7? Ubuntu 14.04?
6. **(Optional Bonus)** How would you do tasks 1 through 5 on CoreOS? Alpine Linux?
7. How can you automate authentication and logging in to a RHEL 7 system?
8. Describe a basic Docker workflow.
9. How can you run Grafana (<https://grafana.com>) in Docker?

Docker

1. Create a Docker image than can be used to run kafkacat (<https://github.com/edenhill/kafkacat>)

Configuration Management

Using the configuration management tool of your choice and on any linux operating systems of your choice, please write a module that:

* Installs Zookeeper ([Apache ZooKeeper](https://zookeeper.apache.org))
* Installs and configures a time synchronization service
* Installs and configures Prometheus node\_exporter

Completion

Create a repository (private is OK) on GitHub. Commit all files to your new GitHub repository. Share your repository with us. Be prepared to discuss your work.