Documentation practical test Regalli

II. Planning

Q1. Explain in details using diagram(s) how to setup this application in a private cloud.

The application is a ruby application, using the gem module sinatra, so to install it, you need to install rubygems and the sinatra module.

The application is stored outside the VM, in the base directory of Vagrant, becoming easier to make changes both from the host and from the VM.

/etc/init.d/webapp to be used in common tasks like stop, start, restart and check (status) of the application.

A small script is configured at crontab to monitor the service and send an email if the application is down. The script is simple, and needs to be replaced by something more robust like monit or the company’s monitoring system.

To install the vm with the application, you can do the following:

git clone <https://github.com/leonardoneves/regalli.git>

cd regalli

vagrant up

The application will be accessible at [http://localhost:8080](http://localhost:8080/)

To manage the vm, you can run vagrant ssh

Q2. How do you ensure high availability?

To have true high availability we need to run 2 different Vms in different datacenters. We need a load balancer to distribute the load between the boxes.

We can use AWS or other cloud solution to have high availability without the necessity to buy servers and physical load balancers.

Q3. How do you ensure security of data?

We can install a reverse proxy (usually apache or ngnix) with HTTPS/TLS. The traffic will be encrypted between the reverse proxy and the clients.

Another way is to change the application to use HTTPS natively.

Q4. How do you optimize the cost of hosting given that most of the traffic happens during work

hours?

First, make sure that processes like backup dont’s run at work hours.

Second, if the server is running in AWS, we can use elastic load balanced to start new servers whenever the traffic increases. Outside the work hours, we need to keep at least two small VMs running to make sure that we have high availability