Consistent backups script

Imagine we have a MongoDB cluster consisting of several data nodes running on managed virtual machines in a cloud. We already have a script that creates snapshots of VM disks and takes a hostname as the only parameter:

```
$ make-vm-snapshot vm-hostname
```

The task is to create a wrapper script around that script to make a consistent (see https://www.mongodb.com/docs/manual/reference/method/db.fsyncLock/ method) snapshot of one of the secondary nodes. The script will be called as follows:

```
$ yourscript
"mongodb://admin:password@vm-hostname1,vm-hostname2,vm-hostname3/admi
n?otherParams"
```

Expected deliverable: a script in python or similar (bash script would also be possible, however it tends to be harder to achieve correct behavior there, especially in edge cases).

Design database setup for microservices

We have two identical environments — test and production — with many services deployed onto k8s clusters.

These services each need an isolated Postgres database. Developers should have read-write access to all services in test environment and read-only in production.

The task is to outline a proposal (as a list of key action items and/or a dozen of sentences) on how this database setup could be implemented inside the two environments. We might discuss this setup and your proposal in more detail in the next interview round.

Some points to consider:

- Managed or on-premise
- Single server or a cluster
- Single server/cluster, server/cluster per environment or server/cluster per application
- How to manage and provision accounts for applications and people