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Web Development 2

Exercise E

1. What is Mongo sharding?  
     
   Mongo sharding is setting up a set of servers to spread out the data over separate machines. This is done mainly due to the data being too large to be on just one server. Data storage size restrictions are limited to hardware capability and cost of ssd/hdd. iterations of 100 of each type, byes -> megabytes -> gigabytes -> terabytes -> petabytes -> exabytes -> zettabytes -> yottabytes. Yottabytes are currently the largest defined size of the bytes serires. Current working standard is terabytes. Only certain servers have even utilized petabytes, by combining terabytes of ssd/hdd.
2. What are the three types of servers involved in Mongo sharding?  
     
   - config  
   - shard  
   - entry

These are further explained by answering the following questions.

1. What is the command  & associated parameters in order to create a shard?  
     
   ./mongod --shardsvr --dbpath \*folder path on machine\* --port \*port number\* --replSet \*name of choice (same name for all)\*

This command is run for each shard server. ./mongod needs to be run from the terminal in the directory of the containing folders. For example on my computer the file path is /opt/mongodb/mongodb/bin/ for the location of the mognod file. --shardsvr is used to let the command line reader know that you’re attempting to work within a shard server. --dbpath is the location of the database, where the information is stored or will be stored. --replSet is telling the command line that the name of the connecting shard sever to link them over all the replications and the configuration folders.

1. What is the command & associated parameter in order to create a sharding configuration server?  
     
   ./mongod --shardsvr --dbpath \*folder path on machine\* --port \*port number\* --replSet \*name of choice (same name for all)\*

This is the same command that is run to setup a replication server, the difference is that the folder path is going to say something referring to it being a configuration server.

1. What is the command & associated parameter(s) in order to create the entry server?  
     
   ./mongos --configdb \*name of choice for the replSet\*/\*location of the repl config and it’s port --port 27004

./mongos is run from the same location in the terminal path as ./mongod. The --configdb command is letting mongo server what the replication set name is to be called. /localhost:27003 is the location of my local replication configuration server and the port that it is using. --port is the port that the entry server is going to be using; this is how you use the ./mongosh to get into the shard servers on the client side.