**Errata**

At minute 1:08, Matt shows how to change the key file permissions to allow the **mongod** process to read the file using way too permissive mode, 600. A more correct permission set would be to use **400**. We've reflected that in the lecture instructions below.

**Lecture Instructions**

The configuration file for the first node (`node1.conf`):

COPY

```
storage:
  dbPath: /var/mongodb/db/node1
net:
  bindIp: 192.168.103.100,localhost
  port: 27011
security:
  authorization: enabled
  keyFile: /var/mongodb/pki/m103-keyfile
systemLog:
  destination: file
  path: /var/mongodb/db/node1/mongod.log
  logAppend: true
processManagement:
  fork: true
replication:
  replSetName: m103-example
```

Creating the keyfile and setting permissions on it:

COPY

```
sudo mkdir -p /var/mongodb/pki/
sudo chown vagrant:vagrant /var/mongodb/pki/
openssl rand -base64 741 > /var/mongodb/pki/m103-keyfile
chmod 400 /var/mongodb/pki/m103-keyfile
```

Creating the dbpath for **node1**:

```
mkdir -p /var/mongodb/db/node1
```
COPY

Starting a **mongod** with `node1.conf`:

```
mongod -f node1.conf
```
COPY

Copying `node1.conf` to `node2.conf` and `node3.conf`:

COPY

```
cp node1.conf node2.conf
cp node2.conf node3.conf
```

Editing `node2.conf` using **vi**:

```
vi node2.conf
```
COPY

Saving the file and exiting **vi**:

```
:wq
```
COPY

**node2.conf**, after changing the **dbpath**, **port**, and **logpath**:

```
storage:
  dbPath: /var/mongodb/db/node2
net:
  bindIp: 192.168.103.100,localhost
  port: 27012
security:
  keyFile: /var/mongodb/pki/m103-keyfile
systemLog:
  destination: file
  path: /var/mongodb/db/node2/mongod.log
  logAppend: true
processManagement:
  fork: true
replication:
  replSetName: m103-example
```
COPY

**node3.conf**, after changing the **dbpath**, **port**, and **logpath**:

```
storage:
  dbPath: /var/mongodb/db/node3
net:
  bindIp: 192.168.103.100,localhost
  port: 27013
security:
  keyFile: /var/mongodb/pki/m103-keyfile
systemLog:
  destination: file
  path: /var/mongodb/db/node3/mongod.log
  logAppend: true
processManagement:
  fork: true
replication:
  replSetName: m103-example
```
COPY

Creating the data directories for **node2** and **node3**:

```
mkdir /var/mongodb/db/{node2,node3}
```
COPY

Starting mongod processes with **node2.conf** and **node3.conf**:

```
mongod -f node2.conf
mongod -f node3.conf
```
COPY

Connecting to **node1**:

```
mongo --port 27011
```
COPY

Initiating the replica set:

```
rs.initiate()
```
COPY

Creating a user:

```
use admin
db.createUser({
    user: "m103-admin",
    pwd: "m103-pass",
    roles: [
        {role: "root", db: "admin"}
    ]
})
```
COPY

Exiting out of the Mongo shell and connecting to the entire replica set:

```
exit
mongo --host "m103-example/192.168.103.100:27011" -u "m103-admin"
-p "m103-pass" --authenticationDatabase "admin"
```
COPY

Getting replica set status:

```
rs.status()
```
COPY

Adding other members to replica set:

```
rs.add("m103.mongodb.university:27012")
rs.add("m103.mongodb.university:27013")
```
COPY

Getting an overview of the replica set topology:

```
rs.isMaster()
```
COPY

Stepping down the current primary:

```
rs.stepDown()
```
COPY

Checking replica set overview after election:

```
rs.isMaster()
```
COPY