

## Create directories

```
C:\Users\Deirdre>cd "C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03"
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03>mkdir Cork
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03>mkdir Limerick
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03>mkdir Dublin
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03>mkdir Galway
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03>cd Cork
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Cork>mkdir node1
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Cork>mkdir node2
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Cork>mkdir node3
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Cork>cd ..
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03>cd Dublin
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Dublin>mkdir node1
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Dublin>mkdir node2
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Dublin>mkdir node3
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Dublin>cd ..
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03>cd Limerick
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Limerick>mkdir node1
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Limerick>mkdir node2
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Limerick>mkdir node3
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Limerick>cd ..
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03>cd Galway
C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Galway>mkdir node1
```

## Replica set – Cork

```
C:\Users\Deirdre>mongod --port 40000 --dbpath "C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Cork\node1" --replSet Cork
2019-04-04T10:51:44.224+0100 I CONTROL [main] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'
2019-04-04T10:51:44.230+0100 I CONTROL [initandlisten] MongoDB starting : pid=2372 port=40000 dbpath=C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Cork\node1 64-bit host=Deirdre-Potter
2019-04-04T10:51:44.230+0100 I CONTROL [initandlisten] targetMinOS: Windows 7/Windows Server 2008 R2
2019-04-04T10:51:44.230+0100 I CONTROL [initandlisten] db version v4.0.6
2019-04-04T10:51:44.231+0100 I CONTROL [initandlisten] git version: caa42a1f75a56c7643d0b68d3880444375ec42e3
2019-04-04T10:51:44.231+0100 I CONTROL [initandlisten] allocator: tcmalloc
2019-04-04T10:51:44.231+0100 I CONTROL [initandlisten] modules: none
2019-04-04T10:51:44.231+0100 I CONTROL [initandlisten] build environment:
2019-04-04T10:51:44.232+0100 I CONTROL [initandlisten] distmod: 2008plus-ssl
2019-04-04T10:51:44.232+0100 I CONTROL [initandlisten] distarch: x86_64
2019-04-04T10:51:44.232+0100 I CONTROL [initandlisten] target arch: x86_64
2019-04-04T10:51:44.232+0100 I CONTROL [initandlisten] options: { net: { port: 40000 }, replication: { replSet: "Cork" }, storage: { dbPath: "C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Cork\node1" } }
2019-04-04T10:51:44.235+0100 I STORAGE [initandlisten] wiredtiger open config: create,cache_size=5574M,session_max=20000,eviction=(threads_min=4,threads_max=4),config_base=false,statistics=(fast),log=(enabled=true,archive=true,path=journal,compressor=snappy),file_manager=(close_idle_time=100000),statistics_log=(wait=0),verbose=(recovery_progress)
2019-04-04T10:51:44.581+0100 I STORAGE [initandlisten] WiredTiger message [1554371504:580817][2372:140713858456288], txn-recover: Set global recovery timestamp: 0
2019-04-04T10:51:44.763+0100 I RECOVERY [initandlisten] WiredTiger recoveryTimestamp. Ts: Timestamp(0, 0)
2019-04-04T10:51:45.019+0100 I CONTROL [initandlisten]
2019-04-04T10:51:45.019+0100 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2019-04-04T10:51:45.020+0100 I CONTROL [initandlisten] Read and write access to data and configuration is unrestricted.
2019-04-04T10:51:45.020+0100 I CONTROL [initandlisten]
2019-04-04T10:51:45.021+0100 I CONTROL [initandlisten] ** WARNING: This server is bound to localhost.
2019-04-04T10:51:45.022+0100 I CONTROL [initandlisten] Remote systems will be unable to connect to this server.
2019-04-04T10:51:45.023+0100 I CONTROL [initandlisten] Start the server with --bind_ip <address> to specify which IP
2019-04-04T10:51:45.024+0100 I CONTROL [initandlisten] addresses it should serve responses from, or with --bind_ip_all to
2019-04-04T10:51:45.025+0100 I CONTROL [initandlisten] bind to all interfaces. If this behavior is desired, start the
2019-04-04T10:51:45.026+0100 I CONTROL [initandlisten] server with --bind_ip 127.0.0.1 to disable this warning.
2019-04-04T10:51:45.027+0100 I CONTROL [initandlisten]
2019-04-04T10:51:45.038+0100 I STORAGE [initandlisten] createCollection: local.startup_log with generated UUID: 59cb6d38-a748-4fde-adb8-7ed96bd6ed34
2019-04-04T10:51:45.056+0100 I FTDC [initandlisten] Initializing full-time diagnostic data capture with directory 'C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Cork\node1\diagnostic.data'
2019-04-04T10:51:45.059+0100 I STORAGE [initandlisten] createCollection: local.replset.oplogTruncateAfterPoint with generated UUID: 7a0b276c-2b53-4fda-83bc-4b16ffdd1da2
2019-04-04T10:51:45.833+0100 I STORAGE [initandlisten] createCollection: local.replset.minvalid with generated UUID: 1a71443d-62ee-4bd9-8490-e96a443845b3
2019-04-04T10:51:46.008+0100 W REPL [ftdc] Rollback ID is not initialized yet.
2019-04-04T10:51:46.009+0100 I REPL [initandlisten] Did not find local voted for document at startup.
2019-04-04T10:51:46.019+0100 I REPL [initandlisten] Did not find local Rollback ID document at startup. Creating one.
2019-04-04T10:51:46.023+0100 I STORAGE [initandlisten] createCollection: local.system.rollback_id with generated UUID: a3a4229d-d39b-494e-9178-451e606e1104
2019-04-04T10:51:46.204+0100 I REPL [initandlisten] Initialized the rollback ID to 1
2019-04-04T10:51:46.205+0100 I REPL [initandlisten] Did not find local replica set configuration document at startup; NoMatchingDocument: Did not find replica set configuration document in local.system.replset
```

```
C:\Users\Deirdre>mongod --port 40001 --dbpath "C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Cork/node2" --replSet Cork
2019-04-04T10:52:29.604+0100 I CONTROL [main] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'
2019-04-04T10:52:29.611+0100 I CONTROL [initandlisten] MongoDB starting : pid=1988 port=40001 dbpath=C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architecture
s/Assignment 03/Cork/node2 64-bit host=HarryPotter
2019-04-04T10:52:29.612+0100 I CONTROL [initandlisten] targetMinOS: Windows 7/Windows Server 2008 R2
2019-04-04T10:52:29.612+0100 I CONTROL [initandlisten] db version v4.0.6
2019-04-04T10:52:29.612+0100 I CONTROL [initandlisten] git version: caa421f75a56c7643d0b68d3880444375ec42e3
2019-04-04T10:52:29.612+0100 I CONTROL [initandlisten] allocator: tcmalloc
2019-04-04T10:52:29.612+0100 I CONTROL [initandlisten] modules: none
2019-04-04T10:52:29.612+0100 I CONTROL [initandlisten] build environment:
2019-04-04T10:52:29.613+0100 I CONTROL [initandlisten] distmod: 2008plus-ssl
2019-04-04T10:52:29.613+0100 I CONTROL [initandlisten] distarch: x86_64
2019-04-04T10:52:29.613+0100 I CONTROL [initandlisten] target_arch: x86_64
2019-04-04T10:52:29.613+0100 I CONTROL [initandlisten] options: { net: { port: 40001 }, replication: { replSet: "Cork" }, storage: { dbPath: "C:/Users/Deirdre/College/
Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Cork/node2" } }
2019-04-04T10:52:29.618+0100 I STORAGE [initandlisten] wiredtiger_open config: create,cache_size=5574M,session_max=20000,eviction=(threads_min=4,threads_max=4),config
base=false,statistics=(fast),log=(enabled=true,archive=true,path=journal,compressor=snappy),file_manager=(close_idle_time=100000),statistics_log=(wait=0),verbose=(recov
ery progress),
2019-04-04T10:52:29.923+0100 I STORAGE [initandlisten] WiredTiger message [1554371549:923118][1988:140713858456288], txn-recover: Set global recovery timestamp: 0
2019-04-04T10:52:30.040+0100 I RECOVERY [initandlisten] WiredTiger recoveryTimestamp. Ts: Timestamp(0, 0)
2019-04-04T10:52:30.260+0100 I CONTROL [initandlisten]
2019-04-04T10:52:30.261+0100 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2019-04-04T10:52:30.261+0100 I CONTROL [initandlisten] ** Read and write access to data and configuration is unrestricted.
2019-04-04T10:52:30.262+0100 I CONTROL [initandlisten]
2019-04-04T10:52:30.264+0100 I CONTROL [initandlisten] ** WARNING: This server is bound to localhost.
2019-04-04T10:52:30.267+0100 I CONTROL [initandlisten] ** Remote systems will be unable to connect to this server.
2019-04-04T10:52:30.268+0100 I CONTROL [initandlisten] ** Start the server with --bind_ip <address> to specify which IP
2019-04-04T10:52:30.270+0100 I CONTROL [initandlisten] ** addresses it should serve responses from, or with --bind_ip_all to
2019-04-04T10:52:30.275+0100 I CONTROL [initandlisten] ** bind to all interfaces. If this behavior is desired, start the
2019-04-04T10:52:30.277+0100 I CONTROL [initandlisten] ** server with --bind_ip 127.0.0.1 to disable this warning.
2019-04-04T10:52:30.279+0100 I CONTROL [initandlisten]
2019-04-04T10:52:30.296+0100 I STORAGE [initandlisten] createCollection: local.startup_log with generated UUID: eac09f61-e632-4346-a05f-fa995cdf29e7
2019-04-04T10:52:30.890+0100 I FTDC [initandlisten] Initializing full-time diagnostic data capture with directory 'C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL
Data Architectures/Assignment 03/Cork/node2/diagnostic.data'
2019-04-04T10:52:30.894+0100 I STORAGE [initandlisten] createCollection: local.replset.oplogTruncateAfterPoint with generated UUID: 5aed8901-5b97-42df-8769-8fef42ed8d8
7
2019-04-04T10:52:31.004+0100 W REPL [ftdc] Rollback ID is not initialized yet.
2019-04-04T10:52:31.065+0100 I STORAGE [initandlisten] createCollection: local.replset.minvalid with generated UUID: f342d53a-1c24-48a5-bd33-3d2fd6d086d4
2019-04-04T10:52:31.214+0100 I REPL [initandlisten] Did not find local voted for document at startup.
2019-04-04T10:52:31.215+0100 I REPL [initandlisten] Did not find local Rollback ID document at startup. Creating one.
2019-04-04T10:52:31.217+0100 I STORAGE [initandlisten] createCollection: local.system.rollback_id with generated UUID: 018e0dee-8289-43a9-9f05-86b9efdc4f47
2019-04-04T10:52:31.429+0100 I REPL [initandlisten] Initialized the rollback ID to 1
2019-04-04T10:52:31.431+0100 I REPL [initandlisten] Did not find local replica set configuration document at startup; NoMatchingDocument: Did not find replica set
configuration document in local.system.replset

C:\Users\Deirdre>mongod --port 40002 --dbpath "C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Cork/node3" --replSet Cork
2019-04-04T10:52:45.904+0100 I CONTROL [main] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'
2019-04-04T10:52:45.911+0100 I CONTROL [initandlisten] MongoDB starting : pid=11732 port=40002 dbpath=C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architectur
es/Assignment 03/Cork/node3 64-bit host=HarryPotter
2019-04-04T10:52:45.911+0100 I CONTROL [initandlisten] targetMinOS: Windows 7/Windows Server 2008 R2
2019-04-04T10:52:45.911+0100 I CONTROL [initandlisten] db version v4.0.6
2019-04-04T10:52:45.911+0100 I CONTROL [initandlisten] git version: caa421f75a56c7643d0b68d3880444375ec42e3
2019-04-04T10:52:45.912+0100 I CONTROL [initandlisten] allocator: tcmalloc
2019-04-04T10:52:45.912+0100 I CONTROL [initandlisten] modules: none
2019-04-04T10:52:45.912+0100 I CONTROL [initandlisten] build environment:
2019-04-04T10:52:45.913+0100 I CONTROL [initandlisten] distmod: 2008plus-ssl
2019-04-04T10:52:45.913+0100 I CONTROL [initandlisten] distarch: x86_64
2019-04-04T10:52:45.913+0100 I CONTROL [initandlisten] target_arch: x86_64
2019-04-04T10:52:45.913+0100 I CONTROL [initandlisten] options: { net: { port: 40002 }, replication: { replSet: "Cork" }, storage: { dbPath: "C:/Users/Deirdre/College/
Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Cork/node3" } }
2019-04-04T10:52:45.917+0100 I STORAGE [initandlisten] wiredtiger_open config: create,cache_size=5574M,session_max=20000,eviction=(threads_min=4,threads_max=4),config
base=false,statistics=(fast),log=(enabled=true,archive=true,path=journal,compressor=snappy),file_manager=(close_idle_time=100000),statistics_log=(wait=0),verbose=(recov
ery progress),
2019-04-04T10:52:46.107+0100 I STORAGE [initandlisten] WiredTiger message [1554371566:107378][11732:140713858456288], txn-recover: Set global recovery timestamp: 0
2019-04-04T10:52:46.185+0100 I RECOVERY [initandlisten] WiredTiger recoveryTimestamp. Ts: Timestamp(0, 0)
2019-04-04T10:52:46.454+0100 I CONTROL [initandlisten]
2019-04-04T10:52:46.454+0100 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2019-04-04T10:52:46.455+0100 I CONTROL [initandlisten] ** Read and write access to data and configuration is unrestricted.
2019-04-04T10:52:46.456+0100 I CONTROL [initandlisten]
2019-04-04T10:52:46.457+0100 I CONTROL [initandlisten] ** WARNING: This server is bound to localhost.
2019-04-04T10:52:46.459+0100 I CONTROL [initandlisten] ** Remote systems will be unable to connect to this server.
2019-04-04T10:52:46.462+0100 I CONTROL [initandlisten] ** Start the server with --bind_ip <address> to specify which IP
2019-04-04T10:52:46.466+0100 I CONTROL [initandlisten] ** addresses it should serve responses from, or with --bind_ip_all to
2019-04-04T10:52:46.467+0100 I CONTROL [initandlisten] ** bind to all interfaces. If this behavior is desired, start the
2019-04-04T10:52:46.469+0100 I CONTROL [initandlisten] ** server with --bind_ip 127.0.0.1 to disable this warning.
2019-04-04T10:52:46.471+0100 I CONTROL [initandlisten]
2019-04-04T10:52:46.487+0100 I STORAGE [initandlisten] createCollection: local.startup_log with generated UUID: 8640a8ff-f17a-48ce-a202-49805cbcbf5
2019-04-04T10:52:47.038+0100 I FTDC [initandlisten] Initializing full-time diagnostic data capture with directory 'C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL
Data Architectures/Assignment 03/Cork/node3/diagnostic.data'
2019-04-04T10:52:47.042+0100 I STORAGE [initandlisten] createCollection: local.replset.oplogTruncateAfterPoint with generated UUID: da372645-9d5e-41e2-b06f-53483d92d1a
a
2019-04-04T10:52:47.244+0100 I STORAGE [initandlisten] createCollection: local.replset.minvalid with generated UUID: bce4a8cb-c0b9-4685-92fb-bb2588345bd6
2019-04-04T10:52:47.381+0100 I REPL [initandlisten] Did not find local voted for document at startup.
2019-04-04T10:52:47.382+0100 I REPL [initandlisten] Did not find local Rollback ID document at startup. Creating one.
2019-04-04T10:52:47.388+0100 I STORAGE [initandlisten] createCollection: local.system.rollback_id with generated UUID: bd0f2afe-3e55-411a-a9d3-9f18714b2fbc
2019-04-04T10:52:47.594+0100 I REPL [initandlisten] Initialized the rollback ID to 1
2019-04-04T10:52:47.595+0100 I REPL [initandlisten] Did not find local replica set configuration document at startup; NoMatchingDocument: Did not find replica set
configuration document in local.system.replset
2019-04-04T10:52:47.612+0100 I CONTROL [LogicalSessionCacheRefresh] Sessions collection is not set up; waiting until next sessions refresh interval: Replication has no
```

```
> rs.initiate()
{
  "info2" : "no configuration specified. Using a default configuration for the set",
  "me" : "localhost:40000",
  "ok" : 1,
  "operationTime" : Timestamp(1554372819, 1),
  "$clusterTime" : {
    "clusterTime" : Timestamp(1554372819, 1),
    "signature" : {
      "hash" : BinData(0,"AAAAAAAAAAAAAAAAAAAAAAAAAAAA="),
      "keyId" : NumberLong(0)
    }
  }
}
Cork:SECONDARY> rs.status()
{
  "set" : "Cork",
  "date" : ISODate("2019-04-04T10:13:44.364Z"),
  "myState" : 1,
  "term" : NumberLong(1),
  "syncingTo" : "",
  "syncSourceHost" : "",
  "syncSourceId" : -1,
  "heartbeatIntervalMillis" : NumberLong(2000),
  "optimes" : {
    "lastCommittedOpTime" : {
      "ts" : Timestamp(1554372822, 5),
      "t" : NumberLong(1)
    },
    "readConcernMajorityOpTime" : {
      "ts" : Timestamp(1554372822, 5),
      "t" : NumberLong(1)
    },
    "appliedOpTime" : {
      "ts" : Timestamp(1554372822, 5),
      "t" : NumberLong(1)
    },
    "durableOpTime" : {
      "ts" : Timestamp(1554372822, 5),
      "t" : NumberLong(1)
    }
  },
  "lastStableCheckpointTimestamp" : Timestamp(1554372822, 1),
  "members" : [
```

```
Cork:PRIMARY> db.oplog.rs.stats().maxSize
NumberLong("17691070720")
Cork:PRIMARY>
Cork:PRIMARY>
Cork:PRIMARY>
Cork:PRIMARY>
Cork:PRIMARY>
Cork:PRIMARY> show dbs
admin          0.000GB
config         0.000GB
local          0.006GB
restaurantdb   0.005GB
Cork:PRIMARY> use local
switched to db local
Cork:PRIMARY> show collections
oplog.rs
replset.election
replset.minvalid
replset.oplogTruncateAfterPoint
startup_log
Cork:PRIMARY> db.getReplicationInfo()
{
  "logSizeMB" : 16871.519775390625,
  "usedMB" : 14.31,
  "timeDiff" : 307105,
  "timeDiffHours" : 85.31,
  "tFirst" : "Sun Mar 17 2019 01:43:53 GMT+0000 (GMT Standard Time)",
  "tLast" : "Wed Mar 20 2019 15:02:18 GMT+0000 (GMT Standard Time)",
  "now" : "Wed Mar 20 2019 15:02:20 GMT+0000 (GMT Standard Time)"
}
Cork:PRIMARY> db.oplog.rs.stats().maxSize
NumberLong("17691070720")
Cork:PRIMARY>
```



## Replica set – Dublin

```
C:\Users\Deirdre>mongod --port 40003 --dbpath "C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Dublin\node1" --replSet Dublin
2019-04-04T10:59:15.375+0100 I CONTROL [main] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'
2019-04-04T10:59:15.380+0100 I CONTROL [initandlisten] MongoDB starting : pid=14924 port=40003 dbpath=C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectur
es\Assignment 03\Dublin\node1 64-bit host=HarryPotter
2019-04-04T10:59:15.381+0100 I CONTROL [initandlisten] targetMinOS: Windows 7/Windows Server 2008 R2
2019-04-04T10:59:15.381+0100 I CONTROL [initandlisten] db version v4.0.6
2019-04-04T10:59:15.381+0100 I CONTROL [initandlisten] git version: caa42a1f75a56c7643d0b68d3880444375ec42e3
2019-04-04T10:59:15.382+0100 I CONTROL [initandlisten] allocator: tcmalloc
2019-04-04T10:59:15.382+0100 I CONTROL [initandlisten] modules: none
2019-04-04T10:59:15.382+0100 I CONTROL [initandlisten] build environment:
2019-04-04T10:59:15.382+0100 I CONTROL [initandlisten] distmod: 2008plus-ssl
2019-04-04T10:59:15.382+0100 I CONTROL [initandlisten] distarch: x86_64
2019-04-04T10:59:15.383+0100 I CONTROL [initandlisten] target arch: x86_64
2019-04-04T10:59:15.383+0100 I CONTROL [initandlisten] options: { net: { port: 40003 }, replication: { replSet: "Dublin" }, storage: { dbPath: "C:\Users\Deirdre\Colleg
e\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Dublin\node1" } }
2019-04-04T11:00:13.680+0100 I STORAGE [initandlisten] wiredtiger_open config: create,cache_size=5574M,session_max=20000,eviction=(threads_min=4,threads_max=4),config_
base=false,statistics=(fast),log=(enabled=true,archive=true,path=journal,compressor=snappy),file_manager=(close_idle_time=100000),statistics_log=(wait=0),verbose=(reco
very_progress),
2019-04-04T11:00:13.956+0100 I STORAGE [initandlisten] WiredTiger message [1554372013:956369][11524:140713858456288], txn-recover: Set global recovery timestamp: 0
2019-04-04T11:00:14.046+0100 I RECOVERY [initandlisten] WiredTiger recoveryTimestamp. Ts: Timestamp(0, 0)
2019-04-04T11:00:14.359+0100 I CONTROL [initandlisten]
2019-04-04T11:00:14.360+0100 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2019-04-04T11:00:14.360+0100 I CONTROL [initandlisten] Read and write access to data and configuration is unrestricted.
2019-04-04T11:00:14.361+0100 I CONTROL [initandlisten]
2019-04-04T11:00:14.363+0100 I CONTROL [initandlisten] ** WARNING: This server is bound to localhost.
2019-04-04T11:00:14.365+0100 I CONTROL [initandlisten] Remote systems will be unable to connect to this server.
2019-04-04T11:00:14.368+0100 I CONTROL [initandlisten] Start the server with --bind_ip <address> to specify which IP
2019-04-04T11:00:14.370+0100 I CONTROL [initandlisten] addresses it should serve responses from, or with --bind_ip_all to
2019-04-04T11:00:14.375+0100 I CONTROL [initandlisten] bind to all interfaces. If this behavior is desired, start the
2019-04-04T11:00:14.377+0100 I CONTROL [initandlisten] server with --bind_ip 127.0.0.1 to disable this warning.
2019-04-04T11:00:14.380+0100 I CONTROL [initandlisten]
2019-04-04T11:00:14.398+0100 I STORAGE [initandlisten] createCollection: local.startup_log with generated UUID: baba1658-87ea-4391-9b4c-4d9ac41a71d3
2019-04-04T11:00:14.883+0100 I FTDC [initandlisten] Initializing full-time diagnostic data capture with directory 'C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL
Data Architectures\Assignment 03\Dublin\node2\diagnostic.data'
2019-04-04T11:00:14.886+0100 I STORAGE [initandlisten] createCollection: local.replset.oplogTruncateAfterPoint with generated UUID: 0ab4eccb-67f2-460c-8b2a-74dc5de185b
e
2019-04-04T11:00:15.005+0100 W REPL [ftdc] Rollback ID is not initialized yet.
2019-04-04T11:00:15.060+0100 I STORAGE [initandlisten] createCollection: local.replset.minvalid with generated UUID: 333f3b14-1894-4f42-81fc-1bab0520f22c
2019-04-04T11:00:15.238+0100 I REPL [initandlisten] Did not find local voted for document at startup.
2019-04-04T11:00:15.238+0100 I REPL [initandlisten] Did not find local Rollback ID document at startup. Creating one.
2019-04-04T11:00:15.241+0100 I STORAGE [initandlisten] createCollection: local.system.rollback_id with generated UUID: 7452eaf7-ef46-4f2c-922e-e13eeb78505d
2019-04-04T11:00:15.431+0100 I REPL [initandlisten] Initialized the rollback ID to 1
2019-04-04T11:00:15.432+0100 I REPL [initandlisten] Did not find local replica set configuration document at startup; NoMatchingDocument: Did not find replica set
configuration document in local.system.replset
```

```
C:\Users\Deirdre>mongod --port 40004 --dbpath "C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Dublin\node2" --replSet Dublin
2019-04-04T11:00:13.675+0100 I CONTROL [main] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'
2019-04-04T11:00:13.675+0100 I CONTROL [initandlisten] MongoDB starting : pid=11524 port=40004 dbpath=C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL Data Architectur
es\Assignment 03\Dublin\node2 64-bit host=HarryPotter
2019-04-04T11:00:13.675+0100 I CONTROL [initandlisten] targetMinOS: Windows 7/Windows Server 2008 R2
2019-04-04T11:00:13.675+0100 I CONTROL [initandlisten] db version v4.0.6
2019-04-04T11:00:13.675+0100 I CONTROL [initandlisten] git version: caa42a1f75a56c7643d0b68d3880444375ec42e3
2019-04-04T11:00:13.675+0100 I CONTROL [initandlisten] allocator: tcmalloc
2019-04-04T11:00:13.676+0100 I CONTROL [initandlisten] modules: none
2019-04-04T11:00:13.676+0100 I CONTROL [initandlisten] build environment:
2019-04-04T11:00:13.676+0100 I CONTROL [initandlisten] distmod: 2008plus-ssl
2019-04-04T11:00:13.677+0100 I CONTROL [initandlisten] distarch: x86_64
2019-04-04T11:00:13.677+0100 I CONTROL [initandlisten] target arch: x86_64
2019-04-04T11:00:13.677+0100 I CONTROL [initandlisten] options: { net: { port: 40004 }, replication: { replSet: "Dublin" }, storage: { dbPath: "C:\Users\Deirdre\Colleg
e\Year 2\Semester 2\NoSQL Data Architectures\Assignment 03\Dublin\node2" } }
2019-04-04T11:00:13.680+0100 I STORAGE [initandlisten] wiredtiger_open config: create,cache_size=5574M,session_max=20000,eviction=(threads_min=4,threads_max=4),config_
base=false,statistics=(fast),log=(enabled=true,archive=true,path=journal,compressor=snappy),file_manager=(close_idle_time=100000),statistics_log=(wait=0),verbose=(reco
very_progress),
2019-04-04T11:00:13.956+0100 I STORAGE [initandlisten] WiredTiger message [1554372013:956369][11524:140713858456288], txn-recover: Set global recovery timestamp: 0
2019-04-04T11:00:14.046+0100 I RECOVERY [initandlisten] WiredTiger recoveryTimestamp. Ts: Timestamp(0, 0)
2019-04-04T11:00:14.359+0100 I CONTROL [initandlisten]
2019-04-04T11:00:14.360+0100 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2019-04-04T11:00:14.360+0100 I CONTROL [initandlisten] Read and write access to data and configuration is unrestricted.
2019-04-04T11:00:14.361+0100 I CONTROL [initandlisten]
2019-04-04T11:00:14.363+0100 I CONTROL [initandlisten] ** WARNING: This server is bound to localhost.
2019-04-04T11:00:14.365+0100 I CONTROL [initandlisten] Remote systems will be unable to connect to this server.
2019-04-04T11:00:14.368+0100 I CONTROL [initandlisten] Start the server with --bind_ip <address> to specify which IP
2019-04-04T11:00:14.370+0100 I CONTROL [initandlisten] addresses it should serve responses from, or with --bind_ip_all to
2019-04-04T11:00:14.375+0100 I CONTROL [initandlisten] bind to all interfaces. If this behavior is desired, start the
2019-04-04T11:00:14.377+0100 I CONTROL [initandlisten] server with --bind_ip 127.0.0.1 to disable this warning.
2019-04-04T11:00:14.380+0100 I CONTROL [initandlisten]
2019-04-04T11:00:14.398+0100 I STORAGE [initandlisten] createCollection: local.startup_log with generated UUID: baba1658-87ea-4391-9b4c-4d9ac41a71d3
2019-04-04T11:00:14.883+0100 I FTDC [initandlisten] Initializing full-time diagnostic data capture with directory 'C:\Users\Deirdre\College\Year 2\Semester 2\NoSQL
Data Architectures\Assignment 03\Dublin\node2\diagnostic.data'
2019-04-04T11:00:14.886+0100 I STORAGE [initandlisten] createCollection: local.replset.oplogTruncateAfterPoint with generated UUID: 0ab4eccb-67f2-460c-8b2a-74dc5de185b
e
2019-04-04T11:00:15.005+0100 W REPL [ftdc] Rollback ID is not initialized yet.
2019-04-04T11:00:15.060+0100 I STORAGE [initandlisten] createCollection: local.replset.minvalid with generated UUID: 333f3b14-1894-4f42-81fc-1bab0520f22c
2019-04-04T11:00:15.238+0100 I REPL [initandlisten] Did not find local voted for document at startup.
2019-04-04T11:00:15.238+0100 I REPL [initandlisten] Did not find local Rollback ID document at startup. Creating one.
2019-04-04T11:00:15.241+0100 I STORAGE [initandlisten] createCollection: local.system.rollback_id with generated UUID: 7452eaf7-ef46-4f2c-922e-e13eeb78505d
2019-04-04T11:00:15.431+0100 I REPL [initandlisten] Initialized the rollback ID to 1
2019-04-04T11:00:15.432+0100 I REPL [initandlisten] Did not find local replica set configuration document at startup; NoMatchingDocument: Did not find replica set
configuration document in local.system.replset
```

```

C:\Users\Deirdre>mongod --port 40005 --dbpath "C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Dublin/node3" --replSet Dublin
2019-04-04T11:01:11.327+0100 I CONTROL [main] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'
2019-04-04T11:01:11.333+0100 I CONTROL [initandlisten] MongoDB starting : pid=15464 port=40005 dbpath=C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architectur
es/Assignment 03/Dublin/node3 64-bit host=HarryPotter
2019-04-04T11:01:11.334+0100 I CONTROL [initandlisten] targetMinOS: Windows 7/Windows Server 2008 R2
2019-04-04T11:01:11.334+0100 I CONTROL [initandlisten] db version v4.0.6
2019-04-04T11:01:11.334+0100 I CONTROL [initandlisten] git version: caa42a1f75a56c7643d0b68d380444375ec42e3
2019-04-04T11:01:11.334+0100 I CONTROL [initandlisten] allocator: tcmalloc
2019-04-04T11:01:11.335+0100 I CONTROL [initandlisten] modules: none
2019-04-04T11:01:11.335+0100 I CONTROL [initandlisten] build environment:
2019-04-04T11:01:11.335+0100 I CONTROL [initandlisten] distmod: 2008plus-ssl
2019-04-04T11:01:11.335+0100 I CONTROL [initandlisten] distarch: x86_64
2019-04-04T11:01:11.336+0100 I CONTROL [initandlisten] target_arch: x86_64
2019-04-04T11:01:11.336+0100 I CONTROL [initandlisten] options: { net: { port: 40005 }, replication: { replSet: "Dublin" }, storage: { dbPath: "C:/Users/Deirdre/Colleg
e/Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Dublin/node3" } }
2019-04-04T11:01:11.340+0100 I STORAGE [initandlisten] wiredtiger_open config: create,cache_size=5574M,session_max=20000,eviction=(threads_min=4,threads_max=4),config_
base=false,statistics=(fast),log=(enabled=true,archive=true,path=journal,compressor=snappy),file_manager=(close_idle_time=100000),statistics_log=(wait=0),verbose=(recov
ery_progress)
2019-04-04T11:01:11.593+0100 I STORAGE [initandlisten] WiredTiger message [1554372071:593062][15464:140713858456288], txn-recover: Set global recovery timestamp: 0
2019-04-04T11:01:11.719+0100 I RECOVERY [initandlisten] WiredTiger recoveryTimestamp. Ts: Timestamp(0, 0)
2019-04-04T11:01:11.947+0100 I CONTROL [initandlisten]
2019-04-04T11:01:11.947+0100 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2019-04-04T11:01:11.949+0100 I CONTROL [initandlisten] ** Read and write access to data and configuration is unrestricted.
2019-04-04T11:01:11.952+0100 I CONTROL [initandlisten]
2019-04-04T11:01:11.954+0100 I CONTROL [initandlisten] ** WARNING: This server is bound to localhost.
2019-04-04T11:01:11.954+0100 I CONTROL [initandlisten] ** Remote systems will be unable to connect to this server.
2019-04-04T11:01:11.960+0100 I CONTROL [initandlisten] ** Start the server with --bind_ip <address> to specify which IP
2019-04-04T11:01:11.962+0100 I CONTROL [initandlisten] ** addresses it should serve responses from, or with --bind_ip_all to
2019-04-04T11:01:11.964+0100 I CONTROL [initandlisten] ** bind to all interfaces. If this behavior is desired, start the
2019-04-04T11:01:11.966+0100 I CONTROL [initandlisten] ** server with --bind_ip 127.0.0.1 to disable this warning.
2019-04-04T11:01:11.968+0100 I CONTROL [initandlisten]
2019-04-04T11:01:11.986+0100 I STORAGE [initandlisten] createCollection: local.startup_log with generated UUID: 10bf9e23-950f-4d4a-a5f2-de080485c58f1
2019-04-04T11:01:12.557+0100 I FTDC [initandlisten] Initializing full-time diagnostic data capture with directory 'C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL
Data Architectures/Assignment 03/Dublin/node3/diagnostic.data'
2019-04-04T11:01:12.560+0100 I STORAGE [initandlisten] createCollection: local.replset.oplogTruncateAfterPoint with generated UUID: 96b99804-74e8-4b7d-98ac-9d75ef3f72a
2
2019-04-04T11:01:12.779+0100 I STORAGE [initandlisten] createCollection: local.replset.minvalid with generated UUID: e5a2e2e5-1188-42fd-85f9-9978828f45a1
2019-04-04T11:01:12.954+0100 I REPL [initandlisten] Did not find local voted for document at startup.
2019-04-04T11:01:12.955+0100 I REPL [initandlisten] Did not find local Rollback ID document at startup. Creating one.
2019-04-04T11:01:12.957+0100 I STORAGE [initandlisten] createCollection: local.system.rollback_id with generated UUID: d1418440-bd04-4cbe-95ca-255bc22a9abe
2019-04-04T11:01:13.084+0100 I REPL [initandlisten] Initialized the rollback ID to 1
2019-04-04T11:01:13.112+0100 I REPL [initandlisten] Did not find local replica set configuration document at startup; NoMatchingDocument: Did not find replica set
configuration document in local.system.replset
2019-04-04T11:01:13.123+0100 I CONTROL [LogicalSessionCacheRefresh] Sessions collection is not set up; waiting until next sessions refresh interval: Replication has no

```

```
Dublin:SECONDARY> rs.status()
{
  "set" : "Dublin",
  "date" : ISODate("2019-04-04T10:22:01.820Z"),
  "myState" : 1,
  "term" : NumberLong(1),
  "syncingTo" : "",
  "syncSourceHost" : "",
  "syncSourceId" : -1,
  "heartbeatIntervalMillis" : NumberLong(2000),
  "optimes" : {
    "lastCommittedOpTime" : {
      "ts" : Timestamp(1554373321, 5),
      "t" : NumberLong(1)
    },
    "readConcernMajorityOpTime" : {
      "ts" : Timestamp(1554373321, 5),
      "t" : NumberLong(1)
    },
    "appliedOpTime" : {
      "ts" : Timestamp(1554373321, 5),
      "t" : NumberLong(1)
    },
    "durableOpTime" : {
      "ts" : Timestamp(1554373321, 5),
      "t" : NumberLong(1)
    }
  },
  "lastStableCheckpointTimestamp" : Timestamp(0, 0),
  "members" : [
    {
      "_id" : 0,
      "name" : "localhost:40004",
      "health" : 1,
      "state" : 1,
      "stateStr" : "PRIMARY",
      "uptime" : 52,
      "optime" : {
        "ts" : Timestamp(1554373321, 5),
        "t" : NumberLong(1)
      },
      "optimeDate" : ISODate("2019-04-04T10:22:01Z"),
      "syncingTo" : "",
      "syncSourceHost" : "",
```

## Replica set – Galway

```

C:\Users\Deirdre>mongod --port 40006 --dbpath "C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Galway/node1" --replSet Galway
2019-04-04T11:01:50.024+0100 I CONTROL [main] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'
2019-04-04T11:01:50.031+0100 I CONTROL [initandlisten] MongoDB starting : pid=7520 port=40006 dbpath=C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architecture
s/Assignment 03/Galway/node1 64-bit host=HarryPotter
2019-04-04T11:01:50.031+0100 I CONTROL [initandlisten] targetMinOS: Windows 7/Windows Server 2008 R2
2019-04-04T11:01:50.032+0100 I CONTROL [initandlisten] db version v4.0.6
2019-04-04T11:01:50.032+0100 I CONTROL [initandlisten] git version: caa42a1f75a56c7643d0b68d3880444375ec42e3
2019-04-04T11:01:50.032+0100 I CONTROL [initandlisten] allocator: tcmalloc
2019-04-04T11:01:50.032+0100 I CONTROL [initandlisten] modules: none
2019-04-04T11:01:50.033+0100 I CONTROL [initandlisten] build environment:
2019-04-04T11:01:50.033+0100 I CONTROL [initandlisten] distmod: 2008plus-ssl
2019-04-04T11:01:50.033+0100 I CONTROL [initandlisten] distarch: x86_64
2019-04-04T11:01:50.033+0100 I CONTROL [initandlisten] target_arch: x86_64
2019-04-04T11:01:50.034+0100 I CONTROL [initandlisten] options: { net: { port: 40006 }, replication: { replSet: "Galway" }, storage: { dbPath: "C:/Users/Deirdre/Colleg
e/Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Galway/node1" } }
2019-04-04T11:01:50.038+0100 I STORAGE [initandlisten] wiredtiger_open config: create,cache_size=5574M,session_max=20000,eviction=(threads_min=4,threads_max=4),config_
base=false,statistics=(fast),log=(enabled=true,archive=true,path=journal,compressor=snappy),file_manager=(close_idle_time=100000),statistics_log=(wait=0),verbose=(recov
ery progress),
2019-04-04T11:01:50.735+0100 I STORAGE [initandlisten] WiredTiger message [1554372110:735075][7520:140713858456288], txn-recover: Set global recovery timestamp: 0
2019-04-04T11:01:51.105+0100 I RECOVERY [initandlisten] WiredTiger recoveryTimestamp. Ts: Timestamp(0, 0)
2019-04-04T11:01:51.106+0100 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2019-04-04T11:01:51.106+0100 I CONTROL [initandlisten] ** Read and write access to data and configuration is unrestricted.
2019-04-04T11:01:51.107+0100 I CONTROL [initandlisten]
2019-04-04T11:01:51.108+0100 I CONTROL [initandlisten] ** WARNING: This server is bound to localhost.
2019-04-04T11:01:51.109+0100 I CONTROL [initandlisten] ** Remote systems will be unable to connect to this server.
2019-04-04T11:01:51.110+0100 I CONTROL [initandlisten] ** Start the server with --bind_ip <address> to specify which IP
2019-04-04T11:01:51.111+0100 I CONTROL [initandlisten] ** addresses it should serve responses from, or with --bind_ip_all to
2019-04-04T11:01:51.114+0100 I CONTROL [initandlisten] ** bind to all interfaces. If this behavior is desired, start the
2019-04-04T11:01:51.117+0100 I CONTROL [initandlisten] ** server with --bind_ip 127.0.0.1 to disable this warning.
2019-04-04T11:01:51.128+0100 I STORAGE [initandlisten] createCollection: local.startup_log with generated UUID: e53e0971-04a3-4ef8-ab7f-97d5e0809fc75
2019-04-04T11:01:51.670+0100 I FTDC [initandlisten] Initializing full-time diagnostic data capture with directory 'C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL
Data Architectures/Assignment 03/Galway/node1/diagnostic.data'
2019-04-04T11:01:51.672+0100 I STORAGE [initandlisten] createCollection: local.replset.oplogTruncateAfterPoint with generated UUID: f78f45b9-0081-4171-ba81-fbac754c539
4
2019-04-04T11:01:51.800+0100 I STORAGE [initandlisten] createCollection: local.replset.minvalid with generated UUID: a1aa052d-95b6-40bb-89f2-c2cb697b7451
2019-04-04T11:01:52.007+0100 I REPL [ftdc] Rollback ID is not initialized yet.
2019-04-04T11:01:52.022+0100 I REPL [initandlisten] Did not find local voted for document at startup.
2019-04-04T11:01:52.023+0100 I REPL [initandlisten] Did not find local Rollback ID document at startup. Creating one.
2019-04-04T11:01:52.024+0100 I STORAGE [initandlisten] createCollection: local.system.rollback.id with generated UUID: e0078d5d-2dd7-4881-acfa-6a66a9f3357f
2019-04-04T11:01:52.199+0100 I REPL [initandlisten] Initialized the rollback ID to 1
2019-04-04T11:01:52.200+0100 I REPL [initandlisten] Did not find local replica set configuration document at startup; NoMatchingDocument: Did not find replica set
configuration document in local.system.replset

C:\Users\Deirdre>mongod --port 40007 --dbpath "C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Galway/node2" --replSet Galway
2019-04-04T11:02:57.686+0100 I CONTROL [main] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'
2019-04-04T11:02:57.686+0100 I CONTROL [initandlisten] MongoDB starting : pid=12396 port=40007 dbpath=C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architectur
es/Assignment 03/Galway/node2 64-bit host=HarryPotter
2019-04-04T11:02:57.686+0100 I CONTROL [initandlisten] targetMinOS: Windows 7/Windows Server 2008 R2
2019-04-04T11:02:57.686+0100 I CONTROL [initandlisten] db version v4.0.6
2019-04-04T11:02:57.686+0100 I CONTROL [initandlisten] git version: caa42a1f75a56c7643d0b68d3880444375ec42e3
2019-04-04T11:02:57.686+0100 I CONTROL [initandlisten] allocator: tcmalloc
2019-04-04T11:02:57.687+0100 I CONTROL [initandlisten] modules: none
2019-04-04T11:02:57.687+0100 I CONTROL [initandlisten] build environment:
2019-04-04T11:02:57.687+0100 I CONTROL [initandlisten] distmod: 2008plus-ssl
2019-04-04T11:02:57.687+0100 I CONTROL [initandlisten] distarch: x86_64
2019-04-04T11:02:57.687+0100 I CONTROL [initandlisten] target_arch: x86_64
2019-04-04T11:02:57.688+0100 I CONTROL [initandlisten] options: { net: { port: 40007 }, replication: { replSet: "Galway" }, storage: { dbPath: "C:/Users/Deirdre/Colleg
e/Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Galway/node2" } }
2019-04-04T11:02:57.692+0100 I STORAGE [initandlisten] wiredtiger_open config: create,cache_size=5574M,session_max=20000,eviction=(threads_min=4,threads_max=4),config_
base=false,statistics=(fast),log=(enabled=true,archive=true,path=journal,compressor=snappy),file_manager=(close_idle_time=100000),statistics_log=(wait=0),verbose=(recov
ery progress),
2019-04-04T11:02:57.963+0100 I STORAGE [initandlisten] WiredTiger message [1554372177:963518][12396:140713858456288], txn-recover: Set global recovery timestamp: 0
2019-04-04T11:02:58.116+0100 I RECOVERY [initandlisten] WiredTiger recoveryTimestamp. Ts: Timestamp(0, 0)
2019-04-04T11:02:58.388+0100 I CONTROL [initandlisten]
2019-04-04T11:02:58.389+0100 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2019-04-04T11:02:58.389+0100 I CONTROL [initandlisten] ** Read and write access to data and configuration is unrestricted.
2019-04-04T11:02:58.390+0100 I CONTROL [initandlisten]
2019-04-04T11:02:58.390+0100 I CONTROL [initandlisten] ** WARNING: This server is bound to localhost.
2019-04-04T11:02:58.392+0100 I CONTROL [initandlisten] ** Remote systems will be unable to connect to this server.
2019-04-04T11:02:58.393+0100 I CONTROL [initandlisten] ** Start the server with --bind_ip <address> to specify which IP
2019-04-04T11:02:58.395+0100 I CONTROL [initandlisten] ** addresses it should serve responses from, or with --bind_ip_all to
2019-04-04T11:02:58.397+0100 I CONTROL [initandlisten] ** bind to all interfaces. If this behavior is desired, start the
2019-04-04T11:02:58.399+0100 I CONTROL [initandlisten] ** server with --bind_ip 127.0.0.1 to disable this warning.
2019-04-04T11:02:58.404+0100 I CONTROL [initandlisten]
2019-04-04T11:02:58.407+0100 I CONTROL [initandlisten]
2019-04-04T11:02:58.422+0100 I STORAGE [initandlisten] createCollection: local.startup_log with generated UUID: 14190b27-7498-4e78-96d0-11a22a11ce43
2019-04-04T11:02:59.044+0100 I FTDC [initandlisten] Initializing full-time diagnostic data capture with directory 'C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL
Data Architectures/Assignment 03/Galway/node2/diagnostic.data'
2019-04-04T11:02:59.048+0100 I STORAGE [initandlisten] createCollection: local.replset.oplogTruncateAfterPoint with generated UUID: 80dadcd4-738e-40a8-8805-2a76aab9d9d
9
2019-04-04T11:02:59.215+0100 I STORAGE [initandlisten] createCollection: local.replset.minvalid with generated UUID: 906f849f-a00c-4475-9dc7-15f6ad31e1ea
2019-04-04T11:02:59.369+0100 I REPL [initandlisten] Did not find local voted for document at startup.
2019-04-04T11:02:59.369+0100 I REPL [initandlisten] Did not find local Rollback ID document at startup. Creating one.
2019-04-04T11:02:59.370+0100 I STORAGE [initandlisten] createCollection: local.system.rollback.id with generated UUID: 0428adda-5842-4977-a8f4-fc96fc401bc1
2019-04-04T11:02:59.559+0100 I REPL [initandlisten] Initialized the rollback ID to 1
2019-04-04T11:02:59.559+0100 I REPL [initandlisten] Did not find local replica set configuration document at startup; NoMatchingDocument: Did not find replica set
configuration document in local.system.replset
2019-04-04T11:02:59.563+0100 I CONTROL [LogicalSessionCacheRefresh] Sessions collection is not set up; waiting until next sessions refresh interval: Replication has no

```



```

C:\Users\Deirdre>mongod --port 40008 --dbpath "C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Galway/node3" --replSet Galway
2019-04-04T11:03:34.442+0100 I CONTROL [main] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'
2019-04-04T11:03:34.448+0100 I CONTROL [initandlisten] MongoDB starting : pid=2920 port=40008 dbpath=C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architecture
s/Assignment 03/Galway/node3 64-bit host=HarryPotter
2019-04-04T11:03:34.449+0100 I CONTROL [initandlisten] targetMinOS: Windows 7/Windows Server 2008 R2
2019-04-04T11:03:34.449+0100 I CONTROL [initandlisten] db version v4.0.6
2019-04-04T11:03:34.449+0100 I CONTROL [initandlisten] git version: caa42a1f75a56c7643d0b68d3880444375ec42e3
2019-04-04T11:03:34.449+0100 I CONTROL [initandlisten] allocator: tcmalloc
2019-04-04T11:03:34.450+0100 I CONTROL [initandlisten] modules: none
2019-04-04T11:03:34.450+0100 I CONTROL [initandlisten] build environment:
2019-04-04T11:03:34.450+0100 I CONTROL [initandlisten] distmod: 2008plus-ssl
2019-04-04T11:03:34.450+0100 I CONTROL [initandlisten] distarch: x86_64
2019-04-04T11:03:34.451+0100 I CONTROL [initandlisten] target_arch: x86_64
2019-04-04T11:03:34.451+0100 I CONTROL [initandlisten] options: { net: { port: 40008 }, replication: { replSet: "Galway" }, storage: { dbPath: "C:/Users/Deirdre/College
s/Assignment 03/Galway/node3" } }
2019-04-04T11:03:34.455+0100 I STORAGE [initandlisten] wiredtiger open config: create,cache_size=5574M,session_max=20000,eviction=(threads_min=4,threads_max=4),config_
base=false,statistics=(fast),log=(enabled=true,archive=true,path=journal,compressor=snappy),file_manager=(close_idle_time=100000),statistics_log=(wait=0),verbose=(recov
ery_progress),
2019-04-04T11:03:34.744+0100 I STORAGE [initandlisten] WiredTiger message [1554372214:743410][2920:140713858456288], txn-recover: Set global recovery timestamp: 0
2019-04-04T11:03:34.869+0100 I RECOVERY [initandlisten] WiredTiger recoveryTimestamp. Ts: Timestamp(0, 0)
2019-04-04T11:03:35.149+0100 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2019-04-04T11:03:35.149+0100 I CONTROL [initandlisten] ** Read and write access to data and configuration is unrestricted.
2019-04-04T11:03:35.152+0100 I CONTROL [initandlisten]
2019-04-04T11:03:35.155+0100 I CONTROL [initandlisten] ** WARNING: This server is bound to localhost.
2019-04-04T11:03:35.158+0100 I CONTROL [initandlisten] ** Remote systems will be unable to connect to this server.
2019-04-04T11:03:35.165+0100 I CONTROL [initandlisten] ** Start the server with --bind_ip <address> to specify which IP
2019-04-04T11:03:35.168+0100 I CONTROL [initandlisten] ** addresses it should serve responses from, or with --bind_ip all to
2019-04-04T11:03:35.170+0100 I CONTROL [initandlisten] ** bind to all interfaces. If this behavior is desired, start the
2019-04-04T11:03:35.176+0100 I CONTROL [initandlisten] ** server with --bind_ip 127.0.0.1 to disable this warning.
2019-04-04T11:03:35.179+0100 I CONTROL [initandlisten]
2019-04-04T11:03:35.206+0100 I STORAGE [initandlisten] createCollection: local.startup_log with generated UUID: 8ec62bid-0286-4844-82fb-5312a7497796
2019-04-04T11:03:35.814+0100 I STORAGE [initandlisten] Initializing full-time diagnostic data capture with directory 'C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL
Data Architectures/Assignment 03/Galway/node3/diagnostic.data'
2019-04-04T11:03:35.816+0100 I STORAGE [initandlisten] createCollection: local.replset.oplogTruncateAfterPoint with generated UUID: dfabddb7-07fc-4e00-be46-09876580322
7
2019-04-04T11:03:36.006+0100 W REPL [ftdc] Rollback ID is not initialized yet.
2019-04-04T11:03:36.108+0100 I STORAGE [initandlisten] createCollection: local.replset.minvalid with generated UUID: d9dec6b2-15df-44af-b90e-48f2cb5c9827
2019-04-04T11:03:36.299+0100 I REPL [initandlisten] Did not find local voted for document at startup.
2019-04-04T11:03:36.299+0100 I REPL [initandlisten] Did not find local Rollback ID document at startup. Creating one.
2019-04-04T11:03:36.299+0100 I STORAGE [initandlisten] createCollection: local.system.rollback.id with generated UUID: 6693ccae-46cb-4f53-90d4-628869667e5d
2019-04-04T11:03:36.516+0100 I REPL [initandlisten] Initialized the rollback ID to 1
2019-04-04T11:03:36.516+0100 I REPL [initandlisten] Did not find local replica set configuration document at startup; NoMatchingDocument: Did not find replica set
configuration document in local.system.replset

```

```

> rs.initiate()
{
  "info2" : "no configuration specified. Using a default configuration for the set",
  "me" : "localhost:40006",
  "ok" : 1,
  "operationTime" : Timestamp(1554373427, 1),
  "$clusterTime" : {
    "clusterTime" : Timestamp(1554373427, 1),
    "signature" : {
      "hash" : BinData(0,"AAAAAAAAAAAAAAAAAAAAAAAAAAAA"),
      "keyId" : NumberLong(0)
    }
  }
}
Galway:SECONDARY> rs.status()
{
  "set" : "Galway",
  "date" : ISODate("2019-04-04T10:23:51.303Z"),
  "myState" : 1,
  "term" : NumberLong(1),
  "syncingTo" : "",
  "syncSourceHost" : "",
  "syncSourceId" : -1,
  "heartbeatIntervalMillis" : NumberLong(2000),
  "optimes" : {
    "lastCommittedOpTime" : {
      "ts" : Timestamp(1554373430, 1),
      "t" : NumberLong(1)
    },
    "readConcernMajorityOpTime" : {
      "ts" : Timestamp(1554373430, 1),
      "t" : NumberLong(1)
    },
    "appliedOpTime" : {
      "ts" : Timestamp(1554373430, 1),
      "t" : NumberLong(1)
    },
    "durableOpTime" : {
      "ts" : Timestamp(1554373430, 1),
      "t" : NumberLong(1)
    }
  },
  "lastStableCheckpointTimestamp" : Timestamp(1554373429, 1),
  "members" : [

```

## Replica set – Limerick

```

C:\Users\Deirdre>mongod --port 40009 --dbpath "C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Limerick/node1" --replSet Limerick
2019-04-04T11:04:27.512+0100 I CONTROL [main] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'
2019-04-04T11:04:27.517+0100 I CONTROL [initandlisten] MongoDB starting : pid=12484 port=40009 dbpath=C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architectur
es/Assignment 03/Limerick/node1 64-bit host=HarryPotter
2019-04-04T11:04:27.517+0100 I CONTROL [initandlisten] targetMinOS: Windows 7/Windows Server 2008 R2
2019-04-04T11:04:27.518+0100 I CONTROL [initandlisten] db version v4.0.6
2019-04-04T11:04:27.518+0100 I CONTROL [initandlisten] git version: caa42a1f75a56c7643d0b68d3880444375ec42e3
2019-04-04T11:04:27.518+0100 I CONTROL [initandlisten] allocator: tcmalloc
2019-04-04T11:04:27.519+0100 I CONTROL [initandlisten] modules: none
2019-04-04T11:04:27.519+0100 I CONTROL [initandlisten] build environment:
2019-04-04T11:04:27.519+0100 I CONTROL [initandlisten] distmod: 2008plus-ssl
2019-04-04T11:04:27.519+0100 I CONTROL [initandlisten] distarch: x86_64
2019-04-04T11:04:27.520+0100 I CONTROL [initandlisten] target arch: x86_64
2019-04-04T11:04:27.520+0100 I CONTROL [initandlisten] options: { net: { port: 40009 }, replication: { replSet: "Limerick" }, storage: { dbPath: "C:/Users/Deirdre/Coll
ege/Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Limerick/node1" } }
2019-04-04T11:04:27.523+0100 I STORAGE [initandlisten] wiredtiger open config: create,cache_size=5574M,session_max=20000,eviction=(threads_min=4,threads_max=4),config
base=false,statistics=(fast),log=(enabled=true,archive=true,path=journal,compressor=snappy),file_manager=(close_idle_time=100000),statistics_log=(wait=0),verbose=(recov
ery_progress),
2019-04-04T11:04:27.790+0100 I STORAGE [initandlisten] WiredTiger message [1554372267:790260][12484:140713858456288], txn-recover: Set global recovery timestamp: 0
2019-04-04T11:04:27.902+0100 I RECOVERY [initandlisten] WiredTiger recoveryTimestamp. Ts: Timestamp(0, 0)
2019-04-04T11:04:28.146+0100 I CONTROL [initandlisten]
2019-04-04T11:04:28.147+0100 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2019-04-04T11:04:28.149+0100 I CONTROL [initandlisten] Read and write access to data and configuration is unrestricted.
2019-04-04T11:04:28.150+0100 I CONTROL [initandlisten]
2019-04-04T11:04:28.153+0100 I CONTROL [initandlisten] ** WARNING: This server is bound to localhost.
2019-04-04T11:04:28.156+0100 I CONTROL [initandlisten] Remote systems will be unable to connect to this server.
2019-04-04T11:04:28.160+0100 I CONTROL [initandlisten] Start the server with --bind_ip <address> to specify which IP
2019-04-04T11:04:28.168+0100 I CONTROL [initandlisten] addresses it should serve responses from, or with --bind_ip_all to
2019-04-04T11:04:28.170+0100 I CONTROL [initandlisten] bind to all interfaces. If this behavior is desired, start the
2019-04-04T11:04:28.173+0100 I CONTROL [initandlisten] server with --bind_ip 127.0.0.1 to disable this warning.
2019-04-04T11:04:28.182+0100 I STORAGE [initandlisten] createCollection: local.startup_log with generated UUID: c518d789-7b33-4691-95f0-686cf09c3c55
2019-04-04T11:04:28.892+0100 I FTDC [initandlisten] Initializing full-time diagnostic data capture with directory 'C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL
Data Architectures/Assignment 03/Limerick/node1/diagnostic.data'
2019-04-04T11:04:28.894+0100 I STORAGE [initandlisten] createCollection: local.replset.oplogTruncateAfterPoint with generated UUID: 0f7c46a3-19f1-4d55-8074-80f6e562a84
4
2019-04-04T11:04:29.009+0100 W REPL [ftdc] Rollback ID is not initialized yet.
2019-04-04T11:04:29.039+0100 I STORAGE [initandlisten] createCollection: local.replset.minvalid with generated UUID: e0d3a4d3-642f-43c5-9999-172b027fad8d
2019-04-04T11:04:29.184+0100 I REPL [initandlisten] Did not find local voted for document at startup.
2019-04-04T11:04:29.185+0100 I REPL [initandlisten] Did not find local rollback ID document at startup. Creating one.
2019-04-04T11:04:29.185+0100 I STORAGE [initandlisten] createCollection: local.system.rollback_id with generated UUID: 996bfd5b-5370-4d71-815f-ad4f200ebff7
2019-04-04T11:04:29.371+0100 I REPL [initandlisten] Initialized the rollback ID to 1
2019-04-04T11:04:29.372+0100 I REPL [initandlisten] Did not find local replica set configuration document at startup; NoMatchingDocument: Did not find replica set
configuration document in local.system.replset

C:\Users\Deirdre>mongod --port 40010 --dbpath "C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Limerick/node2" --replSet Limerick
2019-04-04T11:06:11.772+0100 I CONTROL [main] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'
2019-04-04T11:06:11.772+0100 I CONTROL [initandlisten] MongoDB starting : pid=17220 port=40010 dbpath=C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architectur
es/Assignment 03/Limerick/node2 64-bit host=HarryPotter
2019-04-04T11:06:11.772+0100 I CONTROL [initandlisten] targetMinOS: Windows 7/Windows Server 2008 R2
2019-04-04T11:06:11.773+0100 I CONTROL [initandlisten] db version v4.0.6
2019-04-04T11:06:11.773+0100 I CONTROL [initandlisten] git version: caa42a1f75a56c7643d0b68d3880444375ec42e3
2019-04-04T11:06:11.773+0100 I CONTROL [initandlisten] allocator: tcmalloc
2019-04-04T11:06:11.773+0100 I CONTROL [initandlisten] modules: none
2019-04-04T11:06:11.774+0100 I CONTROL [initandlisten] build environment:
2019-04-04T11:06:11.774+0100 I CONTROL [initandlisten] distmod: 2008plus-ssl
2019-04-04T11:06:11.774+0100 I CONTROL [initandlisten] distarch: x86_64
2019-04-04T11:06:11.774+0100 I CONTROL [initandlisten] target arch: x86_64
2019-04-04T11:06:11.775+0100 I CONTROL [initandlisten] options: { net: { port: 40010 }, replication: { replSet: "Limerick" }, storage: { dbPath: "C:/Users/Deirdre/Coll
ege/Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Limerick/node2" } }
2019-04-04T11:06:11.779+0100 I STORAGE [initandlisten] wiredtiger open config: create,cache_size=5574M,session_max=20000,eviction=(threads_min=4,threads_max=4),config
base=false,statistics=(fast),log=(enabled=true,archive=true,path=journal,compressor=snappy),file_manager=(close_idle_time=100000),statistics_log=(wait=0),verbose=(recov
ery_progress),
2019-04-04T11:06:12.162+0100 I STORAGE [initandlisten] WiredTiger message [1554372372:161618][17220:140713858456288], txn-recover: Set global recovery timestamp: 0
2019-04-04T11:06:12.288+0100 I RECOVERY [initandlisten] WiredTiger recoveryTimestamp. Ts: Timestamp(0, 0)
2019-04-04T11:06:12.544+0100 I CONTROL [initandlisten]
2019-04-04T11:06:12.545+0100 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2019-04-04T11:06:12.546+0100 I CONTROL [initandlisten] Read and write access to data and configuration is unrestricted.
2019-04-04T11:06:12.547+0100 I CONTROL [initandlisten]
2019-04-04T11:06:12.550+0100 I CONTROL [initandlisten] ** WARNING: This server is bound to localhost.
2019-04-04T11:06:12.554+0100 I CONTROL [initandlisten] Remote systems will be unable to connect to this server.
2019-04-04T11:06:12.560+0100 I CONTROL [initandlisten] Start the server with --bind_ip <address> to specify which IP
2019-04-04T11:06:12.563+0100 I CONTROL [initandlisten] addresses it should serve responses from, or with --bind_ip_all to
2019-04-04T11:06:12.565+0100 I CONTROL [initandlisten] bind to all interfaces. If this behavior is desired, start the
2019-04-04T11:06:12.570+0100 I CONTROL [initandlisten] server with --bind_ip 127.0.0.1 to disable this warning.
2019-04-04T11:06:12.571+0100 I CONTROL [initandlisten]
2019-04-04T11:06:12.589+0100 I STORAGE [initandlisten] createCollection: local.startup_log with generated UUID: ad08f916-4cb4-4e50-89cf-702bde8c8438
2019-04-04T11:06:13.212+0100 I FTDC [initandlisten] Initializing full-time diagnostic data capture with directory 'C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL
Data Architectures/Assignment 03/Limerick/node2/diagnostic.data'
2019-04-04T11:06:13.216+0100 I STORAGE [initandlisten] createCollection: local.replset.oplogTruncateAfterPoint with generated UUID: 3f4b67fb-a997-4259-863e-89c566d2648
f
2019-04-04T11:06:13.380+0100 I STORAGE [initandlisten] createCollection: local.replset.minvalid with generated UUID: 4198b1e2-4f37-4cb6-b699-0dbaeac74d87
2019-04-04T11:06:13.505+0100 I REPL [initandlisten] Did not find local voted for document at startup.
2019-04-04T11:06:13.505+0100 I REPL [initandlisten] Did not find local rollback ID document at startup. Creating one.
2019-04-04T11:06:13.507+0100 I STORAGE [initandlisten] createCollection: local.system.rollback_id with generated UUID: 32829c0d-2b75-4ff9-9d17-088614f4d4f8
2019-04-04T11:06:13.657+0100 I REPL [initandlisten] Initialized the rollback ID to 1
2019-04-04T11:06:13.668+0100 I REPL [initandlisten] Did not find local replica set configuration document at startup; NoMatchingDocument: Did not find replica set
configuration document in local.system.replset
2019-04-04T11:06:13.670+0100 I CONTROL [LogicalSessionCacheRefresh] Sessions collection is not set up; waiting until next sessions refresh interval: Replication has no

```

```

C:\Users\Deirdre>mongod --port 40011 --dbpath "C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Limerick/node3" --replSet Limerick
2019-04-04T11:06:51.888+0100 I CONTROL [main] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'
2019-04-04T11:06:51.895+0100 I CONTROL [initandlisten] MongoDB starting : pid=7560 port=40011 dbpath=C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architecture
s/Assignment 03/Limerick/node3 64-bit host=Harry Potter
2019-04-04T11:06:51.896+0100 I CONTROL [initandlisten] targetMinOS: Windows 7/Windows Server 2008 R2
2019-04-04T11:06:51.896+0100 I CONTROL [initandlisten] db version v4.0.6
2019-04-04T11:06:51.896+0100 I CONTROL [initandlisten] git version: caa42a1f75a56c7643d0b68d3880444375ec42e3
2019-04-04T11:06:51.896+0100 I CONTROL [initandlisten] allocator: tcmalloc
2019-04-04T11:06:51.896+0100 I CONTROL [initandlisten] modules: none
2019-04-04T11:06:51.896+0100 I CONTROL [initandlisten] build environment:
2019-04-04T11:06:51.897+0100 I CONTROL [initandlisten] distmod: 2008plus-ssl
2019-04-04T11:06:51.897+0100 I CONTROL [initandlisten] distarch: x86_64
2019-04-04T11:06:51.897+0100 I CONTROL [initandlisten] target arch: x86_64
2019-04-04T11:06:51.897+0100 I CONTROL [initandlisten] options: { net: { port: 40011 }, replication: { replSet: "Limerick" }, storage: { dbPath: "C:/Users/Deirdre/Colle
ge/Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Limerick/node3" } }
2019-04-04T11:06:51.901+0100 I STORAGE [initandlisten] wiredtiger_open config: create,cache_size=5574M,session_max=20000,eviction=(threads_min=4,threads_max=4),config
base=false,statistics=(fast),log=(enabled=true,archive=true,path=journal,compressor=snappy),file_manager=(close_idle_time=100000),statistics_log=(wait=0),verbose=(recov
ery_progress),
2019-04-04T11:06:52.202+0100 I STORAGE [initandlisten] WiredTiger message [1554372412:201778][7560:140713858456288], txn-recover: Set global recovery timestamp: 0
2019-04-04T11:06:52.404+0100 I RECOVERY [initandlisten] WiredTiger recoveryTimestamp. Ts: Timestamp(0, 0)
2019-04-04T11:06:52.624+0100 I CONTROL [initandlisten]
2019-04-04T11:06:52.625+0100 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2019-04-04T11:06:52.626+0100 I CONTROL [initandlisten] Read and write access to data and configuration is unrestricted.
2019-04-04T11:06:52.627+0100 I CONTROL [initandlisten]
2019-04-04T11:06:52.630+0100 I CONTROL [initandlisten] ** WARNING: This server is bound to localhost.
2019-04-04T11:06:52.633+0100 I CONTROL [initandlisten] Remote systems will be unable to connect to this server.
2019-04-04T11:06:52.639+0100 I CONTROL [initandlisten] Start the server with --bind_ip <address> to specify which IP
2019-04-04T11:06:52.645+0100 I CONTROL [initandlisten] addresses it should serve responses from, or with --bind_ip_all to
2019-04-04T11:06:52.647+0100 I CONTROL [initandlisten] bind to all interfaces. If this behavior is desired, start the
2019-04-04T11:06:52.649+0100 I CONTROL [initandlisten] server with --bind_ip 127.0.0.1 to disable this warning.
2019-04-04T11:06:52.650+0100 I CONTROL [initandlisten]
2019-04-04T11:06:52.659+0100 I STORAGE [initandlisten] createCollection: local.startup_log with generated UUID: 6a331686-6ec6-4fde-92f8-bc364356076c
2019-04-04T11:06:53.250+0100 I FTDC [initandlisten] Initializing full-time diagnostic data capture with directory 'C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL
Data Architectures/Assignment 03/Limerick/node3/diagnostic.data'
2019-04-04T11:06:53.254+0100 I STORAGE [initandlisten] createCollection: local.replset.oplogTruncateAfterPoint with generated UUID: 25b25335-4b33-4249-9815-3af2a4906c7
e
2019-04-04T11:06:53.394+0100 I STORAGE [initandlisten] createCollection: local.replset.minvalid with generated UUID: 929f713c-8851-45bd-a7aa-b25d174496d7
2019-04-04T11:06:53.542+0100 I REPL [initandlisten] Did not find local voted for document at startup.
2019-04-04T11:06:53.543+0100 I REPL [initandlisten] Did not find local Rollback ID document at startup. Creating one.
2019-04-04T11:06:53.545+0100 I STORAGE [initandlisten] createCollection: local.system.rollback_id with generated UUID: 9c90ca89-ae79-4865-b1ef-61365cfe318b
2019-04-04T11:06:53.731+0100 I REPL [initandlisten] Initialized the rollback ID to 1
2019-04-04T11:06:53.732+0100 I REPL [initandlisten] Did not find local replica set configuration document at startup; NoMatchingDocument: Did not find replica set
configuration document in local.system.replset
2019-04-04T11:06:53.735+0100 I CONTROL [LogicalSessionCacheRefresh] Sessions collection is not set up; waiting until next sessions refresh interval: Replication has no

```

```

> rs.initiate()
{
  "info2" : "no configuration specified. Using a default configuration for the set",
  "me" : "localhost:40009",
  "ok" : 1,
  "operationTime" : Timestamp(1554373555, 1),
  "$clusterTime" : {
    "clusterTime" : Timestamp(1554373555, 1),
    "signature" : {
      "hash" : BinData(0,"AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA"),
      "keyId" : NumberLong(0)
    }
  }
}
Limerick:SECONDARY> rs.status()
{
  "set" : "Limerick",
  "date" : ISODate("2019-04-04T10:25:59.737Z"),
  "myState" : 1,
  "term" : NumberLong(1),
  "syncingTo" : "",
  "syncSourceHost" : "",
  "syncSourceId" : -1,
  "heartbeatIntervalMillis" : NumberLong(2000),
  "optimes" : {
    "lastCommittedOpTime" : {
      "ts" : Timestamp(1554373558, 5),
      "t" : NumberLong(1)
    },
    "readConcernMajorityOpTime" : {
      "ts" : Timestamp(1554373558, 5),
      "t" : NumberLong(1)
    },
    "appliedOpTime" : {
      "ts" : Timestamp(1554373558, 5),
      "t" : NumberLong(1)
    },
    "durableOpTime" : {
      "ts" : Timestamp(1554373558, 5),
      "t" : NumberLong(1)
    }
  },
  "lastStableCheckpointTimestamp" : Timestamp(1554373558, 1),
  "members" : [

```

## Change oplog size

```
C:\Users\Deirdre>mongo --port 40000 --dbpath "C:/Users/Deirdre/College/Year 2/Semester 2/NoSQL Data Architectures/Assignment 03/Cork/node1" --replSet Cork --oplogSize 25600
```

## Importing restaurants dataset

```
C:\Users\Deirdre>mongoimport --jsonArray --db restaurantdb --collection restaurants --drop --file C:\3.restaurants_dataset.json --port 40000
2019-03-20T14:37:50.303+0000 [.....] restaurantdb.restaurants 0B/11.3MB (0.0%)
2019-03-20T14:38:00.829+0000 connected to localhost:40000
2019-03-20T14:38:00.830+0000 dropping: restaurantdb.restaurants
2019-03-20T14:38:02.309+0000 [##.....] restaurantdb.restaurants 1.04MB/11.3MB (9.2%)
2019-03-20T14:38:04.895+0000 [#####] restaurantdb.restaurants 11.3MB/11.3MB (100.0%)
2019-03-20T14:38:04.896+0000 imported 25359 documents
```

## Explain how this replica set works in terms of automated failover

- The replica set is made up of a group of nodes, with three nodes each in Cork, Dublin, Galway, and Limerick. The nodes are configured to automatically synchronise their data. If the primary node goes offline for any reason, one of the secondary nodes will automatically be promoted to primary, taking over the position.

How to verify and reconfigure the write operation so that it is completed on a majority of the voting members before returning?

```
cfg = rs.conf()
cfg.settings.getLastErrorDefaults = {w:"majority", wtimeout:5000 }
rs.reconfigure(cfg)
```

## Remove all replica sets

```
Cork:PRIMARY> rs.remove("localhost:40000")
{
  "operationTime" : Timestamp(1553096483, 1),
  "ok" : 0,
  "errmsg" : "Replica set configuration contains 0 members, but must have at least 1 and no more than 50",
  "code" : 103,
  "codeName" : "NewReplicaSetConfigurationIncompatible",
  "$clusterTime" : {
    "clusterTime" : Timestamp(1553096483, 1),
    "signature" : {
      "hash" : BinData(0,"AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA"),
      "keyId" : NumberLong(0)
    }
  }
}
Cork:PRIMARY> show dbs
admin 0.000GB
config 0.000GB
local 0.006GB
restaurantdb 0.005GB
Cork:PRIMARY> use local
switched to db local
Cork:PRIMARY> db.system.replset.find()
{ "_id" : "Cork", "version" : 1, "protocolVersion" : NumberLong(1), "writeConcernMajorityJournalDefault" : true, "members" : [ { "_id" : 0, "host" : "localhost:40000", "arBiterOnly" : false, "buildIndexes" : true, "hidden" : false, "priority" : 1, "tags" : { }, "slaveDelay" : NumberLong(0), "votes" : 1 } ], "settings" : { "chainingAllowed" : true, "heartbeatIntervalMillis" : 2000, "heartbeatTimeoutSecs" : 10, "electionTimeoutMillis" : 10000, "catchUpTimeoutMillis" : -1, "catchUpTakeoverDelayMillis" : 30000, "getLastErrorModes" : { }, "getLastErrorDefaults" : { "w" : 1, "wtimeout" : 0 }, "replicaSetId" : ObjectId("5c8da659ca1830edd7da81dd") } }
Cork:PRIMARY> db.system.replset.remove( "_id" : "Cork")
2019-03-20T15:42:55.360+0000 E QUERY [js] SyntaxError: missing ) after argument list @(<shell>):1:31
Cork:PRIMARY> db.system.replset.remove(("_id" : "Cork"))
WriteResult({ "nRemoved" : 1 })
Cork:PRIMARY> db.system.replset.find()
Cork:PRIMARY>
```