

Problem #1:

Timeline on 2023-10-04:

```
* T08:14 - kubedb-operator - MongoDB fed-elastic/fed-elastic does not exist anymore

* T08:14 - kubedb-operator - Failed to process key fed-db-mongo-ram/fed-db-mongo-ram-shard5. Reason: Operation cannot
                             be fulfilled on mongodbs.kubedb.com "fed-db-mongo-ram": the object has been modified; please
                             apply your changes to the latest version and try again

                             failed to create client for setting up replicaset config, error: failed to ping database,
                             error: server selection error: context deadline exceeded, current topology: ... [{ Addr: fed-db-mongo-ram-shard5-1...

                             failed to create client for setting up replicaset config, error: failed to ping database,
                             error: server selection error: context deadline exceeded, current topology: ... [{ Addr: fed-db-mongo-ram-shard23-1...

                             connection pool for fed-db-mongo-ram-mongos-0.fed-db-mongo-ram-mongos-pods.fed-db-mongo-ram.svc:27017 was cleared
                             because another operation failed with: connection(fed-db-mongo-ram-mongos-0 ...

                             Health check failed for database" Key="fed-db-mongo-ram/fed-db-mongo-ram" FailureType=ClientFailure
                             Error="failed to ping database, error: server selection error: context deadline exceeded, current topology:
                             ... [{ Addr: fed-db-mongo-ram-shard5-1 ...

                             ... the kubedb-operator continues to have troubles with Mongo ...

* T08:14 - redeployer      - MongoDB sees CRO status as NotReady

* T08:18 - redeployer      - MongoDB sees CRO status as NotReady, and creates MongoDBOpsRequest to redeploy Mongo
```

Questions:

1. What does “MongoDB fed-elastic/... does not exist anymore” mean?
2. Please advise on this error log: “...the object has been modified; please apply your changes to the latest version and try again”:
 - a) Is this condition part of root cause?
 - b) If yes, then what caused it, and is KubeDB able to handle or recover from this condition?
3. Please review the KubeDB logs and explain why the CRO went to “NotReady” at T08:14 (issues with shard5-1, mongos-0, ...)?
4. The kube-system etcd-server is complaining about slow operations. Do you see anything suspicious in ApiServer / etcd-server that might impact KubeDB? If yes, then please provide log samples that support this conclusion since we must provide an analysis to our customer.

Problem #2:

Continuing from Problem #1:

- * T08:18 - redeployer - MongoDB sees CRO status as NotReady, and creates MongoDBOpsRequest to redeploy Mongo
- * T08:18 - kubedb-enterprise - Begin processing MongoDBOpsRequest
- * T08:25 - redeployer - MongoDB CRO status is Provisioning (... mongo redeployed but CRO stuck in "Provisioning" ...)
- * T08:25 - mongo - Mongo is redeployed from T08:25 thru T08:56 except for shard11-1 that doesn't start until T09:49
Mongo is deployed across all worker nodes (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16)

--> Redeployed Mongo Issue <--

Only mongos-1 is configured with 24 data shards (i.e. "mongos.adminCommand({ addShard : xxx })").
No other mongos instances are aware of the data shards. This leads to error messages such as this:

```
E1004 08:37:46.699184      1 health.go:226] health check failed for mongos for MongoDB:
fed-db-mongo-ram/fed-db-mongo-ram with: failed to write on database with error: (ShardNotFound)
unable to initialize targeter for write op for collection kubedb-system.health-check :: caused by ::
Database kubedb-system not found :: caused by :: No shards found
```

Manual Recovery is needed (kill KubeDB PODS and redeploy fed-db-mongo-ram).

Questions:

1. There are 36 mongos instances, but only mongos-1 is configured with the list of 24 data shards. It appears that KubeDB (or a KubeDB script?) failed to configure the other 35 mongos instances with the list of data shards? Can robustness / retries be added to ensure that the data shards are added to all mongos instances?
2. The CRO remained stuck in "Provisioning" state presumably because the mongos instances were not healthy? (i.e. "No shards found" error when trying to write to Mongo since the majority of mongos instances are not configured with the list of data shards.)
3. Manually deleting the MongoDBOpsRequest and re-creating it to redeploy Mongo did not work. Can robustness / fixes be added to better support this?
4. Please let us know if you see anything else suspicious after T08:18?