

26.01.2021

Exercise Sheet 10

Intro

In this exercise sheet you will study part of the Redis cluster specifications to answer a few questions, to better understand how the cluster handles specific situations.

This exercise sheet consists of one exercise, upload your solutions for this exercises until midnight before the next proseminar.

Exercise 1 (Fault Tolerance in Redis Cluster)

Fault tolerance is an important topic in any distributed system, and the specifications for Redis cluster can be found at the following link: <https://redis.io/topics/cluster-spec>. Use the documentation to answer the following questions thoroughly and in detail:

- a) Which packet types does Redis use to exchange information between nodes?
- b) Describe how Redis handles failure detection.
- c) In the context of Redis, what does “epoch” mean and what is it used for?
- d) What happens if a master node is not reachable? Describe how a Redis cluster recovers from a failing master node.

Upload your answers as textfile or PDF.