QMplus Turnitin Assignment Issues

We are aware that some students are receiving an error message when they submit their assignment in QMplus. There have also been reports of students receiving more than one Turnitin receipt. If you are one of these students, please see the **Technology Enhanced Learning Team w**.

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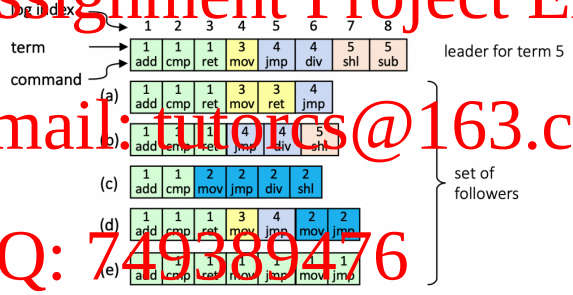
QUESTION 1

Not yet answered Marked out of 10.00

Consider the figure below, which displays the logs (index and command) of a Leader and the ones of few followers in a cluster running Raft as consensus protocol.



Here, the leader has just been elected for term 5. Note that the cluster has more than the showed followers.

Complete the sentences, selecting the right match. Keep in mind that entries are specified using the (index,term) format.

The leader, as soon as elected, received [ ] requests from the external client. We [ ] state whether those are committed or not as [ ].

Follower (a)'s log [ ] occur. This is because [ ].

Follower (b)'s log [ ] occur. This is because [ ].

Follower (c)'s log [ ] occur. This is because [ ].

Follower (d)'s log [ ] occur. This is because [ ].

Follower (e)'s log [ ] occur. This is because [ ].

Suppose that you implemented Raft and deployed it with all servers in the same datacenter. Now suppose that you were going to deploy the system with each server in a different datacenter, spread over the world. What changes would you need to make, if any, in the wide-area version of Raft compared to the single-datacenter version?

- a. This is not possible. Raft requires machines to be as close as possible to each other. This is why we say "Raft cluster".
- b. No changes, it shall w
- c. We shall synchronise e latency between messages would be too high.
- d. We shall decrease the
- e. We shall increase the

QUESTION 3

Answer saved Marked out of 5.00

Consider a Raft cluster deployment. Put the events in the right chronological order, where the number 1, is the first to appear.

1. A stores a new request on its log
2. Once A ascertains that the request has been processed by a majority of the servers, it consider it committed
3. A moves to Candidate state
4. A becomes a Leader
5. A follower (let's call it A) goes in timeout
6. A executes the request
7. A conveys to the followers that they can execute the request
8. A forwards the request to its followers

QUESTION 4

Not yet answered Marked out of 5.00

Let's assume we have a total of 10 servers distributed in two different racks. Let's also assume that it takes around 1microsecond for a message to be broadcasted inside a rack. Instead, it takes around 10microseconds for a message to travel from one rack to the other.

Decide if the following sentences are True or False.

1. I cannot use 10 servers for the consensus as I need an odd number:
2. If I use servers in both clusters, I need to set the election timeout to a number in the order of tens of microseconds:
3. If I use servers in both clusters, I need to set the election timeout to a number in the order of hundreds of microseconds:
4. If I use 10 servers, the system is resilient to four failures:
5. If I would decide to use only 2 servers, the system would not be resilient to any failures:

False True

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