QA Test 2.1

Please send us your answers at your earliest convenience as a reply to this email, and please cc
Roel Van de Paar at

Please indicate how much time you spent on each question. Note; this test is not to be shared online or with others in any form.

General

1.   What is the difference between regression, functional and integration testing?

2.   Without consulting online resources or an actual MySQL client, consider: SELECT 1 FROM (SELECT "B") AS A;

   2.1.   What is the output? 1, A or B?

   2.2.   What is the part between ( ) called?

3.   Without consulting online resources or an actual MySQL client, consider: SELECT * FROM (SELECT "B") AS A JOIN (SELECT "C") AS D;

   3.1.   What is the output?

   3.2.   Is this a Cartesian Join?

   3.3.   "D" is named an ...?

   3.4.   What does "*" do or mean here?

4.   Without consulting online resources, consider: echo "abcabcabc" | sed "s|aBc|xyZ|gi;s|Z|a|;s|c|CCC|g" | xargs ls -ld

   4.1.   What is happening here?

   4.2.   I have previously created a few files, will this command show any of them?

   4.3.   If yes, which one(s)?

   4.4.   Can this line be shortened? Without loosing functionality?

5.   What does trunk, tree and branch mean to you? Tip; no wood involved :)

6.   Consider LP Bug 1193319

   6.1.   Is this an assert or a crash?

6.2. What is the difference between an assert and a crash?

6.3. What frame did the assert or crash happen at?

6.4. And the function name was?

6.5. Which flush method was used for the SE for finding this bug?

6.6. And SE means?

7. Without consulting online resources or an actual bash client, consider: df -h

7.1. What does this command do?

7.2. If I wanted to add an additional disk I would edit what file?

7.3. /dev/sda is likely a ... ?

8. Various sysadmin questions

8.1. How does one setup pass-phrase ssh?

8.2. sudoers is a ...? Is it available on all Windows releases?

8.3. Consider: mysql -uA -pB -PC -hD: what do A, B, PC and D mean?

8.4. Consider: ls >/dev/null 2>&1: what is happening here?

Security

9. What changes to the PCI standard with affect last year and enforcement in 2018 do you think would affect our products ?

10. What is a buffer overflow and why is this important to test for ?

11. Could you explain the dangers of the following SQL statement GRANT ALL ON *.* TO 'username'@'%' IDENTIFIED BY '12345';

12. MySQL uses a double pass of SHA1 for password storage and a salted double pass for SHA1 for network authentication, what are the issues with this and can you think of any alternatives ?

13. How would you ensure forensic integrity for MySQL to ensure post incident response could be carried out ?

14. What SELinux boolean aneeds to be set to 1 to allow Apache to connect to MySQL on another host ?

15. What are SELinux, AppArmor, Grsecurity examples of ?

Transactions

16.   ACID properties
    16.1.   How is D property usually achieved in databases?
        16.1.1.   How it is done in MySQL?
        16.1.2.   How it is done in PostgreSQL
        16.1.3.   How to relax durability in MySQL, what is the benefit of doing this?

17.   Show the example of "Lost update" transaction anomaly
    17.1.   Is this anomaly observed in MySQL READ-COMMITED isolation level? Repeatable-read isolation level? Serializable isolation level?

18.   Show the example of Write Skew transactional anomaly
    18.1.   Is this anomaly observed in MySQL READ-COMMITED isolation level? Repeatable-read isolation level? Serializable isolation level?

19.   What is the difference between Repeatable-read and Snapshot isolation level? Which is stronger?

20.   What is drawback of Serializable isolation level, why it is not implemented by default for all workloads?

Web

21.   What is selenium?
    21.1.   What is an IDE?

22.   Describe how you would test a web frontend?

23.   What does one have to be careful about when testing https websites?
    23.1.   Name some testing strategies around this?

24.   How important is UX in GUI testing? Why?
    24.1.   What is your skillset in UX?