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Vijay Kumar +

ravindra.k.kumar@ericsson.com (Round 1)

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**Round - 01 Technical Round**

(01) Explain about project high level pro

(02) How to do produce and consume in Kafka? Explain complete step by step

(03) What are main requirements to create a producer object?

(04) How many nodes in Kafka in current project and Zoo keeper?

In sync replica in Kafka

Rate yourself in Core JAVA :-

(05) How are memory allocatios done in JAVA?

Garbage collection : Young/old generation, memory partition,

String object = new value assigned; Next line b = a; System.Println("");

What will be the memory allocation for this program?

(06) Collections : Concurrent hasmaps and hashmaps? When to use which one?

--> Time complexity; Threaded application environment; Explain with an example

difference based on 05 aspects to make case for when to use which one

Rate yourself in Multi-threading:-

(07) Life Cycle of a thread: CPU time, Runnable state, Wait

E.G. Thread locks are there at required TPS. How to investigate this case as application its not performing and giving required TPS? How to triage threads in production? Thread Dumbs, Toots, Thread Stack. How to analyse thread dumps? JVM provided.

(08) What does thread dump mainly show? Thread ID and process ID

(09) Java Flight Recorder (X)

Rate yourself in REST BASED SERVICES

(10) Explain with example : Registration page and register successful in DB

Explain REST based request lifecycle. What to define in each layer?

(11) Why to use Spring boot? Benefits of using it? How different from SPRING?

Rate yourself in JUnit

(12) How to add JUnit test cases? Add some JUnit test cases for Registration page in previous example?

Rate yourself in NoSQL :

Can you setup MongoDB and Can you do implementation

(13) When should you use NoSQL or RDBMS. Explain use cases to differentiate?

Data, structure of data, size of data, # of transactions (with ACID), Scaling and replication

Transactions to NoSQL Db and once inserted, can be updated from 2-3 components? Possible in NoSQL DB?

(14) Is MongoDB capable of Managing Distributed transactions? What are limitations?

Rate yourself in Design Pattern:

(15) Explain with example how you have used design pattern?

What benefits were drawn using this design pattern? Chain of commands explained

(16) Containerization concepts: Kubernetes & Docker: Used in production or Aware of?

Rate yourself in Hibernate

(17) PL/SQL: Structure of store procedure (including looping, exception handling)

(18) Registration application: Not able to register. Its failing? How to triage this case?

Consider all cases: Application level; Database level

Performance Tuning in general: Application level / Database level

a) What was done; which tools used?

(19) Aware of Camel?: Open source implementation of ESB + Caching used in past?

(20) Experience of Tableau

(21) Agile methodology awareness

Vijay: **Round - 02 Technical Round**

1. Walkthrough with profile details
2. **Current project:** Monitoring platform: Solution deployed on infrastructure and in-depth health check, Like network Usability, Memory/CPU utilization, access-based system
3. How to monitor java applications? Old school way: Usability functionality
4. Java application running there, application generating logs, 1000 lines are there in log file and next minute now log lines are 1010 lines? How do you now recognize: read all 1010 lines again or just analyse 10?
5. Large size data RDBMS + some data to Postgress

**What version of Spring/Java used?**

1. How Java is platform independent? What is purpose of JVM? Where JDK, JVM, JRE? What is JRE? Difference between JVM & JRE
2. Git operations: basic commands of GIT
3. HashMap v/s K-Map:
4. Dispatcher servlets; ESB system; Source Target.
5. NoSQL DB: - MongoDB/Elastic-Search: Key difference between MongoDB & Elasticsearch
6. Abstract Factory
7. Application working fine last night; Monolithic application becomes un-responsive in morning. What steps should be taken for initial triage

Vijay: **Round - 03 Technical Round**

* Tell me about your current project and your daily involvement in project.
* Monitoring tools – Inbuilt tools available there and what is different with this customized tool and how this is different from open source stacks available for monitoring.
* Deployment structure of this application
* Amount of data for which KAFKA needed to be decided. Message producing to KAFKA.
* Which framework used to create KAFKA producers: JAVA Spring Boot or CAMEL?
* How many topics for this? Various topics in system. Limit your performance
* Which partition to be targeted?
* DB used: Postgress RDBMS; Elastic Search + MongoDB: What do you think about Couchbase
* Hazelcast: Passing heavy data in asynchronous way
* Team size you have worked with 32 members: BE, FE, QA, BA
* Following agile way of delivery
* Are you leading the team now? Along with mentoring 02 resources
* Tools you use for manging daily works: JIRA; For test management: What tools used?
* What work has been domain CI/CD space?

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**Sagar +** [**ravish.kumar.srivastava@ericsson.com**](mailto:ravish.kumar.srivastava@ericsson.com) **(Round1) +** [**rajesh.prasad@ericsson.com**](mailto:rajesh.prasad@ericsson.com) **(Round 2)**

**Round - 01 Technical Round**

Intro about yourself

RDBMS --

What is PL/SQL?

What is cursor? Write a cursor. Define in detail, give example how to use?

What are triggers?

What are joins? What is right join?

NoSQL --

How does mongoDb work?

What is the mongo data structure?

Caching --

What is Redis?

It is data structures, difference between Redis and MongoDB

Hibernate --

Hibernate how to query employees between a salary range? using criteria as well?

What is criteria, how to use. Basic syntax, lt, gt, eq

Spring boot --

What are actuators is spring boot?

What are Prometheus?

Threading in java --

Have you used threads? How to implement?

Executor framework basics?

What is deadlock? How to avoid deadlock?

Can thread be in a blocked state? How to identify such state? Tools which can help?

Tools --

Do you know about camel?

Project Management --

Have you worked in agile? Do you know scrum and daily?

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ROUND -02 Technical skills; Level of exposure to Cloud

1. Walkthrough the profile and technical abilities
2. How much experience in UI/ FE development?
3. What all servers have been used?
4. Spring based application: Hosted on JBOSS/TOMCAT: Request life-cycle steps involved
5. Aware of AOP? Implementation in Spring boot application?
6. What is different type of Advisors?
7. Bean scope in Spring framework - How many scopes are there? How to achieve them in Spring boot?
8. Prototype v/s Request scope
9. Spring framework: Have you used @qualifier @required annotations?
10. Controller vs Rest Controller?
11. What are different HTTP methods used in API? Difference between post, put & patch? What are options?
12. Have you worked on Single sign on or OAuth2? How to validate custom token?
13. Restricting resources for authorization: Manager should have access to one resource information and Partner should not have access to these details.

Ans: Driven by Roles and security config file: Roles can be attached; Web security configuration adapter in Spring boot

1. What all components used in Spring boots and spring clouds: Netflix Eureka; Ribbon for client-side load balancing, Circuit breaker pattern
2. Explain Implementation of circuit breaker pattern? 2service – one is down; what configurations were made? @EnableCircuitBraker on top of REST controller; @history command and a call-back command. Fallback function would have returned some response.
3. Have you implemented distributed logging: ELK used for distributed.
4. MSA Environment: - Multiple micro services – How do you maintain properties file for these services? If we do not want to keep properties inside application: Explain your thought process to solve this issue?
5. Worked in Hibernate: Which version was used? Different between get and load method. Which one to use when?
6. 2nd level caching: explain how this was implemented; Configurations
7. Improving performance of stored procedure: 5/10 million records in a PL/SQL block and called frequently. How performance can be improved of this block? (X)
8. File uploading web service: Its performing bad and how will you improve performance around file upload; concrete details i.e. API names. (X)

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Rashmi Tomer + [rana.kundu@ericsson.com](mailto:rana.kundu@ericsson.com) **(Round 1)** +Ravish **Round (02)**

Round 01: -

1. Walkthrough with your profile
2. Experience in database side: MySQL/Oracle/DB2: Have you worked on debugging Triggers/Functions/Procedure
3. Comparable /Comparators / Comparable v/s Custom comparable: How to use it?
4. XML configuration: - How to use XML configuration when we do not want to use Spring.

Fully Qualified class name: From that configuration: create an object and call a method. How this can be done? (X)

1. Have you used reflection? Do you know when to use it? Please share example for reflection.
2. Have you used multi-threading concepts? Thread used for printing. What you have used for multi-threading: What are various use cases for multi-threading
3. Race around condition & Deadlock condition: How to resolve these issues in multi-threading environment
4. Have used Synchronized or lock concepts? Explain purpose of each with difference between these 2? What is synchronous block?
5. What kind of spring used: - Spring MVC/IOC/AOP: - What is Life cycle of a spring bean? How to do before spring initializes? Init Method
6. Transaction Manager: Rollback: in DB or Hibernate: - Explain how to roll back a transaction with minimal code. Using Try/Catch block - Transactional annotation used before?
7. Worked on Performance Tuning/issues on performance testing or memory leak condition:

How you analysed the performance issues you have faced in past projects? Explain with example. Heap analysers – Analysed heap dump – checking for object size

Have you used Flight recorder/JVM Visualizer?

1. Services used: SOAP & REST: What is the difference between REST & SOAP.
2. Have you used Custom annotations?
3. Singleton pattern: What things needs to be taken care: Serialized my object and de-serialize my objects
4. Have use design patterns? Ans: Abstract /Adapter. What is Factory pattern? Factory pattern explained
5. What is Camel?
6. What is KAFKA?
7. Caching technologies used: Ehcache/Redis/Memcached/Hazelcast: Distributed cache? Explain how you have used? **Loader writer cache**: What is the purpose of this?

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Round 02:- [**ravish.kumar.srivastava@ericsson.com**](mailto:ravish.kumar.srivastava@ericsson.com)

1. Walkthrough with profile
2. Spring Boot: - What all components used in Spring boot?
3. Actuators are used for.
4. What configuration to change for application server in Spring Boot?
5. REST Based services exposed: How REST based services are exposed? What annotations are used for creating spring boot services
6. Spring MVC: - Explain the flow of simple MVC
7. Exposing a REST services using spring possible? Let say Database having user records and want to fetch the record of a particular user with User Id = 1234; How would you write your REST service for fetching these records? Sending JSSON structure to input request: How to achieve it?

Let’s say create a user which have multiple fields: How to write web service for this

PUT vs POST:

1. Spring CORE: What is IOC? Inversion of Control? Dependency injection? Difference between IOC & DI? How we use DI in Spring MVC?
2. Comfortable in SQL: Dedicated DBAs available in all accounts but aware of SQL queries
3. What are triggers? What is cursor: Point to some row of database table? Difference between procedure and function: function returns value procedure does not
4. Basic structure of writing the procedure: Create Procedure procedure-name; Table on which it is created, End key word
5. Difference between type & Row Type (X)
6. One of my queries is running slow - Pick any example: - query is running slow; what should be my next action: - Select query: look for tables: -
7. NoSQL DB: What type of NoSQL Database?
8. Difference between Mongo DB vs Cassandra: Read it some time back; Basic difference is w.r.t. way they stored data.
9. Performance tuning in JAVA: Memory leaks
10. Tools used for Heap Dumps analysis: MAT Memory analyser tool (open source)
11. Java application and not getting required TPS from application: - Steps to identify what is wrong with my application:

Check 1: - Not dependent on application but network also can contribute

Check 2: - Thread Dumps (X) Interviewer helped on that:

Check 3: -

How to take thread dump; How will you analyse it? Have not come across such problems of analysing thread dump.

1. Which all design pattern you have used: Adaptor, Abstract factory, Singleton

Class called Car: Base class something like = Maruti, Hyundai, BMW, and Honda:

Structure them in factory pattern.

Car interface, Main interface: Generic object: Explaining adapter pattern in Factory discussion

1. Serialization to File: - skipping some attributes while Serialization: Custom Serializable class - Transient variables