EP 9 - GraphQL, REST vs gRPC | JWT vs SAML vs OAuth2.0

Tech interview questions which you must prepare
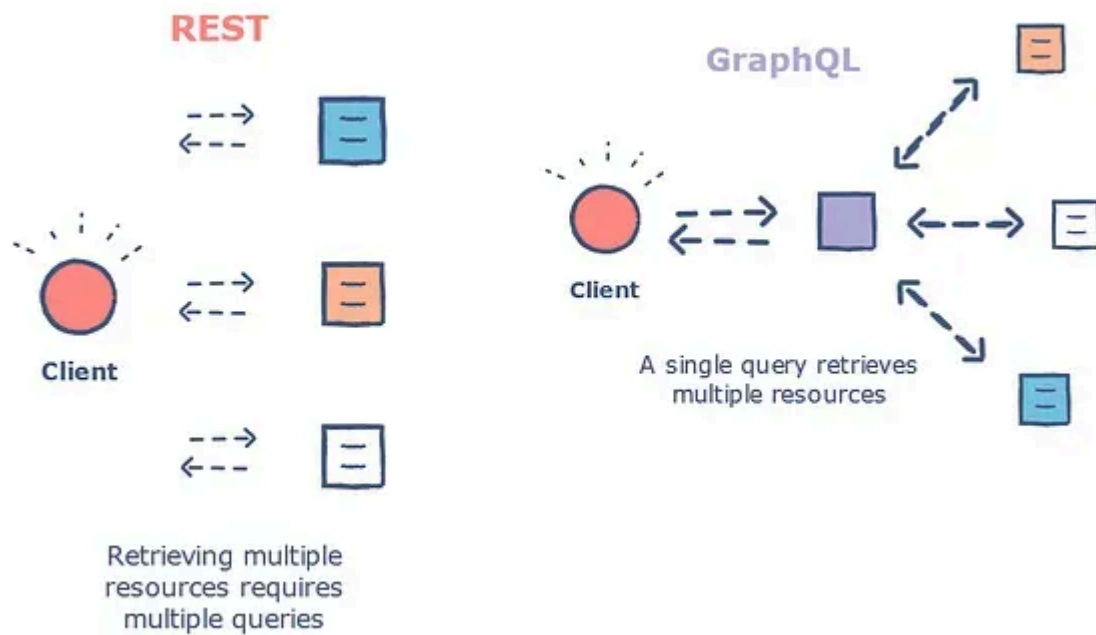
JAVINPAUL AND SOMA
MAY 19, 2023 · PAID

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Hello folks,

How are you doing? This week we will cover a few interesting technical Interview questions, but before that, big news first.

I just launched my new course **Java SE 17 Certification Java SE 17 Topic-wise practice test. on Udemy for Java SE 17 certification. This is my second course,** after the success of my previous course - **Java SE 17 Mock Test for the 1Z0-829 Exam**.

This also means you have more than 500+ questions to practice and prepare for Java SE 17 certification.

Here is what you will find in this course:

1. **Five Topic wise test**

2. **250+ questions with answers and explanations (I also explained why specific options were not correct)**

3. **covers Java SE 17 syllabus topic wise**

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1:29:32 **II** Finish test

★ Question 7:

Select all the options that can be replaced in the blank line in line 1 which does not result in a compile-time or run-time error.

```
1  public class Converter {
2
3      public static final void _£(short _short, char ...chars) {
4          char[] array = chars;
5          array = new char[] {(char) _short};
6          System.out.println(array[0]);
7      }
8
9      public static void main(String[] args) {
10
11          _____  // Line 1
12      }
13  }
```

☐ _£((short) 'a', 'b', 'c')

☐ _£(1, 'b', 'c');

☐ _£(null, null);

☐ _£((short) 1.0f, null);

Difference between REST, GraphQL, and gRPC

	REST	GraphQL	gRPC
Definition	Representational State Transfer	Query language for APIs	Remote Procedure Call with Protocol Buffers
HTTP Methods	GET, POST, PUT, DELETE	POST	Custom methods
Data Format	JSON or XML	GraphQL-specific format	Binary format
Endpoint Style	Multiple endpoints	Single endpoint	None
Query Language	None	GraphQL	None
Real-Time Updates	No (polling only)	Yes (via subscriptions)	Yes (via streaming)
Efficiency	Medium	High	High
Caching	Yes, but can be complex to manage	Fine-grained and easy to manage	Less common, requires more setup
Interoperability	High	Medium	Low

REST stands for Representational State Transfer, a popular protocol for creating web services that expose data and functionality over HTTP. It is based on HTTP protocol and a set of constraints that define how resources are identified and addressed and how operations can be performed on those resources.

On the other hand, GraphQL is a query language for APIs that was developed by Facebook. It allows clients to specify exactly what data they need, and the server responds with only that data.

GraphQL was created to address the shortcomings and limitations of REST. Hence it provides a more flexible and efficient way of fetching data from a server, as clients can request multiple resources in a single request.

Here is a nice diagram that explains how REST and GraphQL work:

And gRPC is a high-performance, open-source protocol used for creating APIs. It uses **Google's Protocol Buffers** as a data format and supports streaming and bi-directional communication. gRPC is often used in microservice architectures because of its performance and support for multiple programming languages.

What is the difference between JWT, OAuth, and SAML?

	JWT	OAuth	SAML
Purpose	Token-based authentication mechanism for transmitting claims	Protocol for authorization and authentication in web and mobile apps	Protocol for exchanging authentication and authorization data between parties
Centralized Server	None	Authorization server	Identity provider
Used For	Authentication and authorization	Authorization, not authentication	Authentication and authorization
Applications	Single-page apps, mobile apps	Apps that rely on external APIs or services	Enterprise environments
Relationship	Directly between parties	Between third-party apps and resource owners	Between identity providers and service providers
Authentication	Yes	No	Yes
Authorization	Yes	Yes	Yes

JWT stands for **JSON Web Token,** a *standard for securely transmitting information between parties as a JSON object.* It is used to authenticate and authorize users and is commonly used in modern web applications. JWTs are digitally signed so that they can be verified and trusted.

On the other hand, **OAuth** (**Open Authorization**) is an *open standard for authorization that allows third-party applications to access user data without requiring users to share their login credentials.* It is commonly used in applications that need to access data from external services, such as social media platforms or APIs.

Similarly, **SAML** (**Security Assertion Markup Language**) is another standard for *exchanging authentication and authorization data between parties, specifically between an identity provider (IdP) and a service provider (SP).* It is commonly used in enterprise applications to provide single sign-on (SSO) functionality.

One of the most famous examples of SAML is SingPass authentication, which uses Singapore Government to access government websites like Vaccination Certificates, CPF, IRAS, etc.

How Does Practice Test Help to Crack Java Certification?

- Practice tests can help you identify your weaknesses. By taking practice tests, you can see which areas of the exam you're strong in and which areas you need to work on.

- Practice tests can help you improve your timing. The Java Certification 1Z0–829 is a timed exam, so answering the questions in the allotted time is essential. Practice tests can help you understand the time pressure and learn how to manage your time effectively.

- Practice tests can help you build your confidence. The more practice tests you take, the more comfortable you will become with the exam format and the types of questions asked. This can help you feel more confident on the day of the exam.

You probably think, "**But I don't have time to take practice tests!**" But trust me, it's worth it. It will make a big difference even if you can only take a few practice tests.

And if you're looking for a great practice test resource, I highly recommend **my new Udemy course about 1Z0–829**. My course includes 250 questions on different topics for this exam, and I've also included detailed explanations for each answer.

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1. Java SE 17 - 1Z0-829 Certification

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Once again, thanks for reading this so far. Do let me know how you found this newsletter and what you want to see; your feedback is critical as it will drive how we produce this newsletter in the future.

I plan to share one or two Java interview questions and essential concepts in every issue, but if you want more or want to see any particular type of content, do let us know.

All the best, and keep learning

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