

# Top 25 Microservices Interview Questions and Answers

## 1) Explain microservices architecture

Microservice Architecture is an architectural development style which builds an application as a collection of small autonomous services developed for a business domain.

## 2) Name three commonly used tools for Microservices

- Wiremock, 2.) Docker and 3.) Hysrix are important Microservices tool.

## 3) What is Monolithic Architecture?

Monolithic architecture is like a big container in which all the software components of an application are clubbed inside a single package.

## 4) What are the advantages of microservices?

Here, are some significant advantages of using Microservices:

- Technology diversity, e., Microservices can mix easily with other frameworks, libraries, and databases
- Fault isolation, e., a process failure should not bring the whole system down.
- Greater support for smaller and parallel team
- Independent deployment
- Deployment time reduce

## 5) What is Spring Cloud?

Spring cloud is an Integration software that integrates with external systems. It allows microservices framework to build applications which perform restricted amounts of data processing.



## 6) Discuss uses of reports and dashboards in the environment of Microservices

Reports and dashboards help in monitoring and upkeep of Microservices. Tons of Application Monitoring Tools assist in this.

## 7) What are main differences between Microservices and Monolithic Architecture?

### Microservices

Service Startup is fast

Microservices are loosely coupled architecture.

Changes done in a single data model does not affect other Microservices.

Microservices focuses on products, not projects

### Monolithic Architecture

Service startup takes time

Monolithic architecture is mostly tightly coupled.

Any changes in the data model affect the entire database

Monolithic put emphasize over the whole project

## 8) What are the challenges faced while using Microservices?

- Microservices always rely on each other. Therefore, they need to communicate with each other.
- As it is distributed system, it is a heavily involved model.
- If you are using Microservice architecture, you need to ready for operations overhead.
- You need skilled professionals to support heterogeneously distributed microservices.

## 9) In which cases microservice architecture best suited?

Microservice architecture is best suited for desktop, web, mobile devices, Smart TVs, Wearable, etc.

## 10) Tell me the name of some famous companies which are using Microservice architecture

Most large-scale websites like Twitter, Netflix, Amazon, have advanced from a monolithic architecture to a microservices architecture.

## 11) What are the characteristics of Microservices?

- Essential messaging frameworks
- Decentralized Governance
- Easy Infrastructure automation
- Design for failure
- Infrastructure automation

## 12) What is RESTful?

Representational State Transfer (REST)/RESTful web services is an architectural style that helps computer systems to communicate over the internet. These web services make microservices easier to understand and implement.

## 13) Explain three types of Tests for Microservices?

In Microservice architecture tests are divided into three broad categories:

- At the bottom level test, we can perform a general test like performance and unit tests. These kinds of tests are entirely automated.

- At the middle level, we can perform exploratory tests like the stress tests and usability tests.
- At the top level, we can conduct acceptance tests which are mostly fewer in numbers. It also helps stakeholders to know about different software features.

#### **14) What are Client certificates?**

Client certificates is a digital certificate used to make authenticated requests to a remote server. It is termed as a client certificate.

#### **15) Explain the use of PACT in Microservices architecture?**

It is an open source tool which allows testing interactions between service providers and consumers. However, it is separated from the contract made. This increases the reliability of the Microservices applications.

#### **16) What is the meaning of OAuth?**

OAuth means open authorization protocol. This protocol allows you to access the client applications on HTTP for third-party providers GitHub, Facebook, etc. It helps you to share resources stored on one site with another site without the need for their credentials.

#### **17) What is End to End Microservices Testing?**

End-to-end testing validates every process in the workflow is functioning correctly. It also ensures that the system works together as a whole and satisfies all requirements.

#### **18) Why are Container used in Microservices?**

Containers are easiest and effective method to manage the microservice based application. It also helps you to develop and deploy individually. Docker also allows you to encapsulate your microservice in a container image along with its dependencies. Microservice can use these elements without additional efforts.

#### **19) What is the meaning of Semantic monitoring in Microservices architecture?**

Semantic monitoring combines automated tests with monitoring of the application. It allows you to find out reasons why your business is not getting more profits.

#### **20) What is a CDC?**

CDC is Consumer-Driven Contract. It is a pattern for developing Microservices so that external systems can use them.

#### **21) What is the use of Docker?**

Docker offers a container environment which can be used to host any application. This software application and the dependencies that support it which are tightly-packaged together.

#### **22) What are Reactive Extensions in Microservices?**

Reactive Extensions is also called Rx. It is a design pattern which allows collecting results by calling multiple services and then compile a combined response. Rx is a popular tool in distributed systems which works exactly opposite to legacy flows.

#### **23) Explain the term 'Continuous Monitoring.'**

Continuous monitoring is a method which is used for searching compliance and risk issues associated with a company's operational and financial environment. It contains human, processes, and working systems which support efficient and actual operations.

#### 24) How independent micro-services communicate with each other?

It depends upon your project needs. However, in most cases, developers use HTTP/REST with JSON or Binary protocol. However, they can use any communication protocol.

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