

# Variations

In this lesson, we'll discuss some variations in the microservices platform approach that we have looked at so far.

## WE'LL COVER THE FOLLOWING ^

- REST
- Frontend integration
- Operation
- Physical hardware
- Virtual hardware

## REST #

Microservices platforms appear to be particularly suitable for synchronous microservices and REST communication, as they offer particularly good support for this.

## Frontend integration #

The platforms can be extended to allow other communication mechanisms and frontend integration can be implemented with these platforms.

Client frontend integration is completely independent of the platform used. Only with server-side frontend integration would the server have to be installed and operated on the platform.

## Operation #

The platform can also cover the operational aspect for asynchronous microservices. Better support for the operation of the microservices alone is a good reason to use the platforms. Operation is one of the most important challenges with microservices. This aspect is independent of the communication mechanism used.

## Physical hardware #

The question arises whether there are other environments for the operation of microservices. A theoretical alternative to the platforms is physical hardware, however, physical hardware is hardly used any more for cost reasons.

## Virtual hardware #

Virtual hardware is inflexible and heavyweight, so the only alternative to a platform is “docker without scheduler”. In this scenario, Docker containers are installed on classic servers.

In this case, the macro architecture standardizes the operation to use **only one technology for log analysis or monitoring** and thus to work efficiently.

Microservices platforms **already have such features**. You do not have to build support for **logging or monitoring** yourself, but you can use these parts of the platform. This can be a simpler solution because implementing log analysis for many microservices can be very costly.

**Resilience** and other features such as **load balancing have to be implemented** at the virtual machine level since the Docker infrastructure does not offer these.

At the end of the day, it can happen that the **features of a microservices platform** like log analysis, monitoring, reliability, and load balancing are **recreated step by step** instead of installing and using a prepackaged microservices platform.

## QUIZ

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\_\_\_\_\_ frontend integration will have to be installed and operated on the platform.

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In the next lesson, we'll conclude this chapter.