Is NoSQL More Performant than SQL?

In this lesson, we will learn if the NoSQL database is more performant than the SQL databases.

WE'LL COVER THE FOLLOWING

Is NoSQL more performant than SQL? This question is asked all the time. And I have a one-word answer for this.

No!!

From a technology benchmarking standpoint, both *relational* and *non-relational* databases are equally performant.

More than the technology, it's how we design our systems using the technology that affects the performance.

Both *SQL* & *NoSQL* tech have their use cases. We have already gone through them in the lessons *When to pick a relational database?* & *When to pick a NoSQL database?*

So, don't get confused with all the hype. Understand your use case and then pick the technology accordingly.

Why Do Popular Tech Stacks Always Pick NoSQL Databases?

But why do the popular tech stacks always pick NoSQL databases? For instance, the *MEAN* (*MongoDB*, *ExpressJS*, *AngularJS/ReactJS*, *NodeJs*) stack.

Well, most of the applications online have common use cases. And these tech

stacks have them covered. There are also commercial reasons behind this.

Now, there are a plethora of tutorials available online & a mass promotion of popular tech stacks. With these resources, it's easy for beginners to pick them up and write their applications as opposed to running solo research on other technologies.

Though, we don't always need to stick with the popular stacks. We should pick what fits best with our use case. There are no ground rules, pick what works for you.

We have a separate lesson on how to pick the right tech stack for our app further down the course. We will continue this discussion there.

Coming back to the performance, it entirely depends on the application & the database design. If we are using more *Joins* with *SQL*. The response will inevitably take more time.

If we remove all the relationships and joins, *SQL* becomes just like *NoSQL*.

Real World Case Studies

Facebook uses MySQL for storing its social graph of millions of users. Though it did have to change the DB engine and make some tweaks but MySQL fits best for its use case.

Quora uses MySQL pretty efficiently by partitioning the data at the application level. This is an interesting read on it.

> **Note:** A well-designed SQL data store will always be more performant than a not so well-designed NoSQL store.

Hmmm.... Ok!! Alright

Using Both SQL & NoSQL Database In An Application

Can't I use both in my application? Both SQL & a NoSQL datastore. What if I have a requirement fitting both?

You can!! As a matter of fact, all the large-scale online services use a mix of both to implement their systems and achieve the desired behaviour.

The term for leveraging the power of multiple databases is called *Polyglot Persistence*. Let's know more about it in the next lesson.