Discuss the challenges of moving a relational database to a NoSQL database. What are the advantages of the NoSQL approach that may make these challenges worthwhile?

The challenges of moving a relational database to a NoSQL database include selecting the model, designing the schema, migrating the data, and translating queries. There are multiple options when choosing a non-relational model to convert the relational database to NoSQL. The first challenge is to assess the current relational database and decide which non-relational model best fits the data and the needs of the database. After choosing the most appropriate model, a new schema needs to be designed for the database. This new schema needs to translate relationships to the non-relational model and maintain appropriate data types during migration. Migrating data can be challenging due to these requirements. When migrating data from PostgreSQL to MongoDB, there are two options: returning queries as a TSV file and returning queries as a JSON file. The first option, however, is limited as it is best suited for simpler schemas that do not employ one-to-many relationships. The JSON method can handle more complex schemas, though. Another challenge is converting all SQL queries to queries in the language of the NoSQL platform. Not only does this include translating the syntax, but also adjusting the logic of the queries to match the new schema design. Designing new schemas in a non-relational database allows for greater flexibility and scalability than with the relational approach. A non-relational schema may be easier to update, can handle highly transactional usage, and can scale as the database grows. The schema design may also make queries more efficient by reducing the number of JOIN operations depending on the model chosen.

<https://www.mongodb.com/resources/compare/mongodb-postgresql/dsl-migrating-postgres-to-mongodb>

<https://www.geeksforgeeks.org/strategies-for-migrating-from-sql-to-nosql-database/>

[https://medium.com/@myjob.rajesh/migrating-from-relational-to-non-relational-databases-key-insights-action-plan-f97fd9bd64d5#:~:text=\*%20Scalability%20&%20Performance:%20NoSQL%20databases%20excel,in%20rewriting%20queries%20and%20modifying%20the%20application](https://medium.com/@myjob.rajesh/migrating-from-relational-to-non-relational-databases-key-insights-action-plan-f97fd9bd64d5#:~:text=*%20Scalability%20&%20Performance:%20NoSQL%20databases%20excel,in%20rewriting%20queries%20and%20modifying%20the%20application).

<https://www.linkedin.com/advice/3/what-most-common-challenges-pitfalls-nosql>