Unlock your data with IBM StepZen Graph Server

Break down data silos while writing less code with highly responsive GraphQL APIs

Highlights

Unlock siloed data with GraphQL

Accelerate building GraphQL APIs

Use declarative building blocks

Optimize and scale GraphQL APIs

With microservices and new data being created faster than ever, data continues to be spread across multiple silos. Yet users and applications want one view of the data. Today, creating one view involves complex API creation and orchestration, forcing teams to spend time on development rather than value-added work. GraphQL is helping solve this problem. GraphQL is an emerging technology adopted by companies big and small, from innovative startups to Fortune 500 companies. With GraphQL, companies can iterate faster on APIs and application development by creating a unified GraphQL data layer for all their data.

Today, building GraphQL APIs are complex and require significant development time. However, with IBM® StepZen Graph Server, you can build and deploy a production-level GraphQL API in a fraction of the time. IBM StepZen Graph Server helps companies develop and deploy a GraphQL API faster without having to compromise on performance, security or scalability. You can also combine, or federate, data coming from multiple sources such as SQL, NoSQL, REST, SOAP and other GraphQL APIs.

GraphQL helps to unlock siloed data

Siloed data across multiple systems force application developers to deal with different protocols, structures, security mechanisms, performance and other issues. These activities drain developer productivity while creating little value. But there is a universal, federated API that can be built to abstract the backend complexities and deliver a simple, intuitive, and consistent "view" to application developers. GraphQL is emerging as the new standard for APIs that request data from backends and layers upon investments in REST APIs and data systems. However, while GraphQL is significantly easier for the application teams to consume, it represents a challenge to API teams who are tasked with building it. The team not only has to build the API but also deploy, protect, optimize, evolve and scale it. This process can take months and often requires specific skills, such as GraphQL query optimization, that many API teams don't have in abundance.

Build GraphQL APIs faster and with greater efficiency

IBM StepZen Graph Server supports you in your GraphQL journey. You can use it to quickly create a data mesh across enterprise data (SOAP or XML, REST, SQL or NoSQL backends) and an execution runtime for the data mesh with low latency, high throughput and security baked in.

The secret of IBM StepZen Graph Server is declarative APIs. Similar to the way databases changed the application landscape—from requiring programmatic data manipulation to declarative creation and access—IBM StepZen Graph Server is doing the same to the GraphQL API landscape.

With declarative APIs, the code is more straightforward and faster to write. Equally important, IBM StepZen Graph Server's underlying runtime automatically handles deployment, protection, scale and optimization so that specialized skills aren't required for success.

Using declarative building blocks

When using IBM StepZen Graph Server, a GraphQL API is composed using declarative building blocks. Each building block connects to a data source and defines a mapping to the GraphQL type system.

Developers build graphs by composing declarative building blocks. This process includes building foundational building blocks by connecting to backends, linking those building blocks together in a single graph, and building "supergraphs" by composing GraphQL graphs. IBM StepZen Graph Server enables GraphQL federation using declarations and supports building and enabling subgraphs that plug in to alternative technologies.

IBM StepZen Graph Server also has powerful import capabilities leveraging sophisticated introspection techniques to generate schemas from backends. This mechanism often reduces the task of creating foundational building blocks to a single line of code.

Optimize and scale GraphQL
With standard GraphQL libraries, a developer or a team of developers must continually optimize to make an API performant. Using IBM StepZen Graph Server, you can create a performant API without having to write any code.

While other tools claim that converting a GraphQL query into a database execution is the best way to process GraphQL queries, this is not necessarily true. GraphQL queries are not exactly like database queries. For one thing, they are hierarchical in nature. In addition, the source of data is whatever the backends are as opposed to tables and views managed by the database system. IBM StepZen Graph Server helps reduce the pain of building, optimizing and scaling GraphQL APIs.

Conclusion
The backends that deliver data to GraphQL are diverse. And that data is your most precious resource. By leveraging tools such as IBM StepZen Graph Server, businesses can overcome the challenge of data fragmentation and provide users access to their mission-critical data using GraphQL APIs. IBM StepZen Graph Server makes it easier to build GraphQL APIs using declarative building blocks and compose data together from multiple graphs.

The declarative approach of IBM StepZen Graph Server to building GraphQL APIs (including federated GraphQL) results in less and more intuitive code, better runtime performance, and faster time to value. Since the APIs are built declaratively, you don’t have to worry about writing your own code to optimize and scale.

For more information
To learn more about IBM StepZen Graph Server, contact your IBM representative or IBM Business Partner, or visit ibm.com/products/stepzen.

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New Orchard Road
Armonk, NY 10504

Produced in the
United States of America
June 2023

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