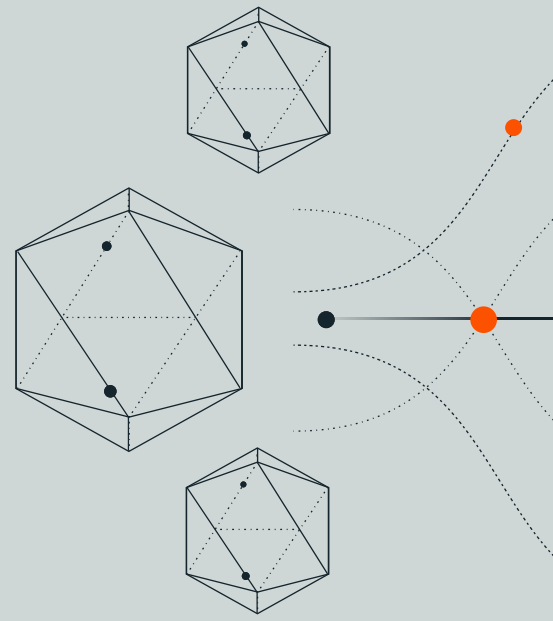
APOLLO

SOLUTION BRIEF

Enhance customer experience with Apollo GraphOS



KEY BENEFITS

SINGLE SOURCE OF TRUTH

Enable better consistency with an integrated system of record for the data that is consumed by your applications.

FASTER OMNICHANNEL DEVELOPMENT

Accelerate development and easily add new channels on a single, unified API platform.

DELIVER PERSONALIZED AND CONSISTENT EXPERIENCE

Deliver personalized and consistent customer experiences by providing flexible data retrieval, aggregation from multiple data sources, and capturing real-time updates.

BOOST PERFORMANCE

Deliver performant applications by reducing unnecessary network calls required to fetch data.

Introduction

In today's digital economy, a seamless customer experience proves critical to business success. According to the 2024 Gartner CIO and Technology Executive Survey, excelling in customer experience (61%) ranks as the topmost objective in digital technology investments. This emphasis is well-justified, as a single bad experience can kill a customer's interest and trust. In fact, 32% of customers say that they will leave a brand permanently after they had just one bad experience with them. Additionally, users expect fast and seamless online experiences, and a slow website can easily irritate potential customers. Organizations that fail to deliver engaging customer experiences risk not only losing to competitors but also facing significant revenue losses. The stakes couldn't be higher.

Customers today engage with brands through multiple channels, including websites, mobile apps, social media, and physical stores. Omnichannel has become the go-to term to describe how data is shared across a company so that customers will have a unified experience interacting with all parts of a business. As the demands of modern businesses continue to evolve, delivering a seamless and personalized customer experience across multiple channels has become more critical than ever.

In the race to meet customers wherever they are, companies readily add new application interfaces, but often the valuable customer data collected is stranded in silos or in logic written across various frontends. This makes it difficult to understand customer preferences and provide personalized engagements. It also creates disjointed, fragmented experiences for customers as they switch between touchpoints that don't share the same data sources. Achieving true omnichannel experience requires connecting data and experiences across all touchpoints.

79%
expect consistent experience wherever they engage (web, social media, mobile, in person)

Salesforce[1]

32%
would stop doing business with a brand they loved after one bad experience

PwC[2]

2.6x
more likely to purchase more after a positive customer experience.

Global Study:
ROI of Customer Experience[3]

Figure: Today's customer mindset

Exploring API strategies

In the quest to deliver seamless customer experiences across multiple channels, Application Programming Interfaces (APIs) play a pivotal role as the backbone of modern digital interactions. While enterprise API programs have matured in terms of stability, security, and discoverability through tools like API gateways, the true value emerges when these APIs are effectively utilized across various frontend applications.

This is where the challenge lies: frontend teams often face the daunting task of aggregating, orchestrating, and composing APIs to create engaging omnichannel experiences. Approaches like backends-for-frontends (BFFs) or Experience APIs aim to abstract backend complexity for frontend teams, but they often lead to duplicated effort, inconsistencies across frontends and technical debt, ultimately hindering innovation.

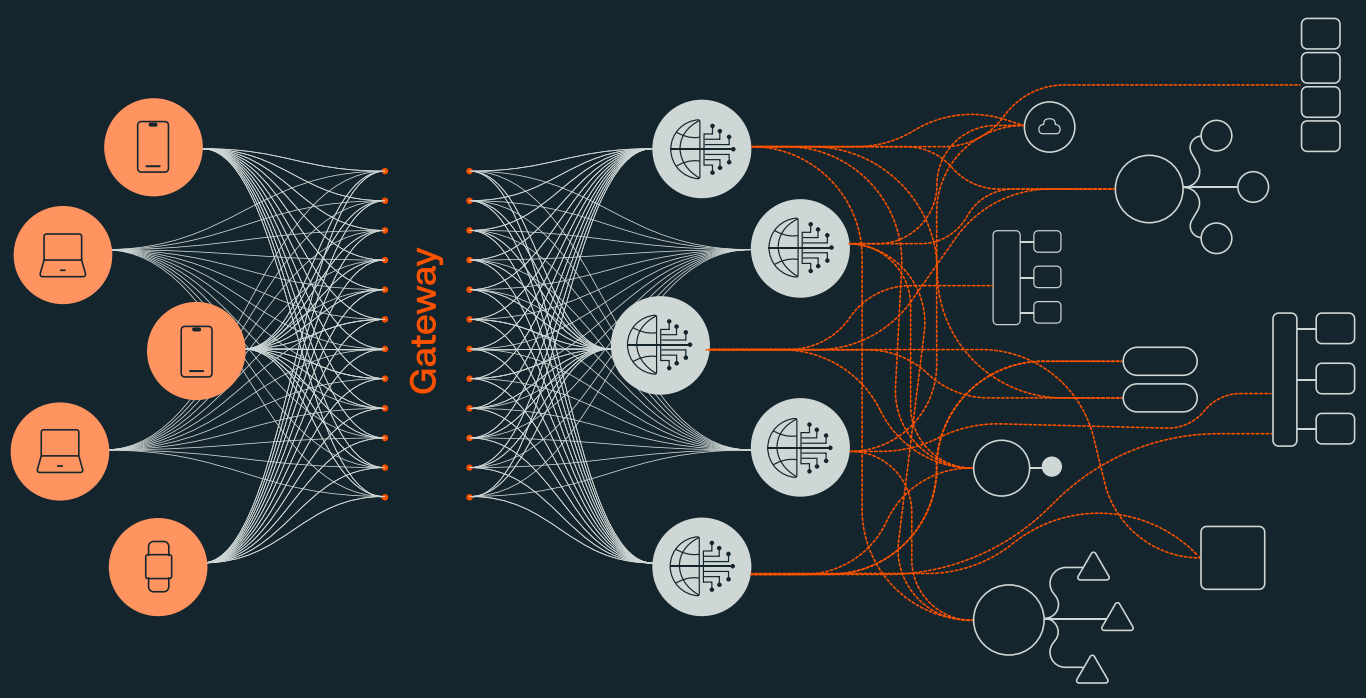


Figure: Experience APIs or backends-for-frontends

[1] Salesforce, State of the Connected Customer," August 2023. [2] PwC, Experience is everything: Here's how to get it right, 2018
[3] Qualtrics, Global Study: ROI of Customer Experience, 2022

Apollo GraphOS: The API platform for the modern stack

Drive better consistency with an API composition layer

Apollo GraphOS provides a unified API experience that helps map data across all channels via a common data model. Rather than delivering APIs as a barrage of new endpoints to manage, a federated GraphQL architecture (Apollo Federation) powered by Apollo GraphOS platform empowers teams to use GraphQL to build an API composition layer. This architecture enables backend teams to connect APIs and make them available via a single endpoint. Frontend teams can then define custom operations to access this data. This means frontend teams — whether they work on the website, mobile apps, TVs or tablets — can all use the same API to accomplish their specific goals.

Prioritize engaging customer experiences instead of wrangling endpoints

This approach also helps to decouple frontend and backend development. Frontend teams can work independently, designing queries that suit their UI requirements without direct dependencies on backend changes. Eliminating friction between frontend and backend teams also fosters a culture of experimentation, allowing frontend developers to prioritize user needs over API versioning and data stitching concerns. Varo Bank, for instance, was able to ship **4x faster** with this decoupled approach and rapidly deliver a customer-centric banking solution that helped differentiate Varo in a crowded market. Similarly, Globoplay's journey with Apollo enabled them to **ship experiments 10x faster**, ensuring they consistently deliver engaging customer experiences.

Adding GraphQL to the API stack helps reduce unnecessary network calls that slow your apps down. Apollo GraphOS makes GraphQL even faster with better observability tools and caching, boosting application performance.

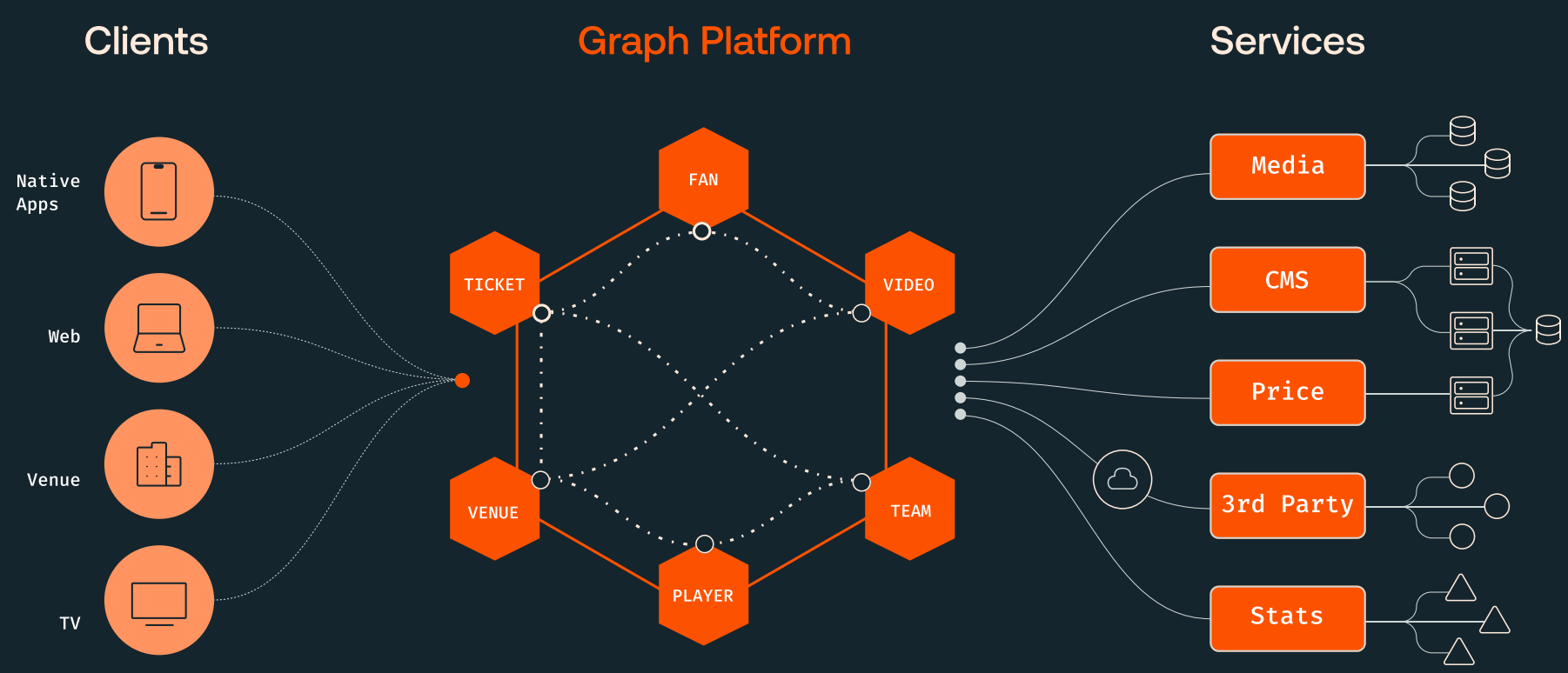


Figure: GraphQL platform – an API composition layer

Simplify personalized experiences with federated GraphQL

Apollo GraphOS also helps deliver personalization across all channels. Apollo Federation allows each channel to operate independently to report users' preferences and easily propagate across any number of interfaces. By using GraphQL's flexible querying capabilities, frontend teams can easily retrieve and combine customer data from different systems and present it in a way that is tailored to specific users' needs. Organizations can also leverage this cross-channel data to fuel accurate recommendations. For example, if the user consistently favors sci-fi movies on a media company's mobile app, a recommendation engine can reflect that preference when they browse on their smart TV.

Case study: Expedia Group

Expedia Group, a leading travel platform managing over 200 booking sites and 25 brands, faced challenges due its complex technology stack. The company struggled with the task of delivering a seamless experience for travelers using multiple touchpoints during their planning, shopping, and traveling journeys. Seeking to improve customer experiences and streamline their development process, Expedia embarked on a journey to adopt a unified graph approach with GraphQL and Apollo. This transformation was driven by the realization that their existing architecture, comprising multiple traditional REST services, led to bottlenecks, duplication of effort, and slowed down feature delivery. By transitioning to a federated GraphQL architecture powered by Apollo GraphOS, Expedia aimed to create cohesive customer experiences across various client platforms while reducing complexity and accelerating innovation.

The adoption of Apollo Federation enabled Expedia to centralize their data and services into a single graph, facilitating collaboration between teams and providing a unified interface for accessing data. With a common entry point for clients, teams were freed from the requirement to directly connect to multiple services, resulting in improved efficiency and faster development cycles.

The Apollo GraphOS platform enabled developers to seamlessly monitor, detect, and prevent schema breaks, ensuring the reliability and scalability of their graph infrastructure. This enabled developers to focus more on enhancing customer experiences rather than managing APIs, leading to a significant reduction in code complexity and technical debt.

By funneling all their digital capabilities into one central federated architecture powered by Apollo GraphOS, Expedia was able to condense several disparate tech stacks into one, build the trips experience 3x faster than their old approach and create a unified user experience across 25 brands.

Case study: Volvo

Volvo Cars aimed for 50% of their sales to move online by 2025. They faced significant challenges due to a complex system landscape, leading to development delays, site abandonment, and inaccurate pricing and graphics.

Transitioning from a GraphQL monolith to a federated GraphQL architecture with Apollo GraphOS enhanced Volvo's online sales and injected resilience by eliminating unplanned breaking changes and inspiring developers to innovate with accessible data. Adding a federated GraphQL layer helped aggregate data from 40 different REST endpoints into one single source of truth, enabling frontend developers to find the data they need 99.5% faster. It also enabled rapid prototyping and implementation of new features like company car policies, proving essential to Volvo's online sales strategy and offering a consistent user journey on their website.

"The supergraph is key to achieving our online sales goals because it makes data readily available for developers to use across our website, allowing us to show consistent information throughout the user journey on volvocars.com. At the end of the day, that is what's going to help us sell more cars."
- Stephan Lonntorp, Senior Engineering Manager, Volvo Cars

Summary

In today's highly competitive landscape, delivering exceptional omnichannel customer experiences is crucial for businesses to thrive. By leveraging Apollo GraphOS, organizations can harness the power of a federated GraphQL architecture to create a unified API experience that seamlessly connects data across all channels. This approach not only enables faster development cycles and rapid adoption of new channels but also facilitates the delivery of personalized, data-driven experiences tailored to individual customer needs. Trailblazers like Expedia and Volvo Cars have harnessed Apollo GraphOS to streamline operations, foster innovation, and enhance customer experiences.

Ready to elevate your customer experiences to new heights? Connect with experts at Apollo today to learn how your organization can deliver a seamless omnichannel experience.