

Aby API Streamer

API Streamer makes it easy to deploy, manage, and distribute data streams to third parties - so they can consume and integrate those streams into their own apps.



Data sheet 2019

The realtime API economy continues to grow exponentially. Businesses that facilitate easy integration with their realtime APIs now will reap the rewards that only first movers can.

The amount of realtime data is immense and continues to expand. Looking to 2020 and beyond, the proportion of data produced and consumed in realtime is growing exponentially. [IDC predict](#) that by 2025 1/3 of all data produced globally will be realtime.

To successfully capture this market, data producers need to meet developers' growing expectations for event-driven or streaming data exposed through realtime APIs. According to [Gartner](#), 50% of all managed APIs will be event-driven by 2020. And 40% of developers believe APIs are in need of innovation.

The modern internet is built on exposing and consuming data through REST APIs. Some of today's most valuable businesses made their fortunes by being the best at making their APIs readily available. Yet for data delivered in realtime, the request/response model of REST APIs isn't fit for purpose: latency is high and load is heavy, and they're an expensive and inefficient way of exposing high-volume, time-sensitive data.

Across industries, organizations are scrambling to provide realtime APIs to kick-start cultures of innovation around their products and attract developers, for whom REST APIs increasingly fail to meet performance expectations. For data producers, challenges preventing them from deploying realtime APIs include a fragmented ecosystem and complex, expensive engineering and operational requirements. New types of tools, infrastructure, and management methods are needed today to help organizations meet this exploding demand for realtime APIs.

While countless tools exist to help organizations manage every aspect of their REST APIs, none have existed - until now - for their realtime equivalents.

Aby's API Streamer combines Aby's proven [global realtime messaging cloud network](#) with realtime API management tools. The result is the world's first realtime API management and distribution platform to deploy, manage, and distribute data streams to third parties as realtime APIs.



Benefits

- ✓ **Deploy realtime data**
API Streamer decouples the complexity of distributing data from the simple operation of publishing event data as it happens. It ensures transport providers have a fixed level of complexity and cost regardless of the number of downstream consumers of their data.
- ✓ **Manage realtime data**
API Streamer provides data flow control to data producers and transport providers through rich management dashboards, analytics on usage, and access control tools. Data producers can control exactly who has access to data, specific aspects of data, volume of data, and even who pays for the data delivery costs (the bandwidth).
- ✓ **Distribute realtime data**
API Streamer, built on Aby's globally-distributed [Data Stream Network](#), allows developers to easily consume data at any scale, with any number of protocols. Aby's platform handles the heavy lifting of scale, performance, reliability, data integrity, protocol transformation (for example, MQTT or SSE) and push (e.g. serverless function invocation or Kafka delivery) all at sub-65ms global latencies.
- ✓ **Safe and secure**
We want to keep your APIs and data safe and secure from attack. Denial of Service protection and mitigation is baked into the service to secure your APIs against attack. End-to-end encryption is available in addition to numerous authentication and authorization schemes, including token-based and JWT authentication with fine grained access controls.

Deploy to serverless, fully-managed infrastructure

Abyl provides fully-managed serverless infrastructure so you can quickly deploy realtime APIs without provisioning servers. We support integration with cloud, hybrid, or on-prem setups. Whatever your system architecture, API Streamer will seamlessly integrate with it.

All the management tools you'd expect

Much of the overhead from both REST APIs and realtime APIs stems from aspects that require management. While API management tools have abstracted this away from REST APIs, companies exposing realtime APIs often have to build their own tooling.

With the API Streamer management dashboard and APIs, you don't need to build your own in-house solutions for managing everything to do with your realtime APIs. Instead you gain all the management options you'd expect: developer registration, permission management, token auth, analytics, rate limiting, security, and more.

End-to-end high-performance distribution

This is where realtime APIs fundamentally differ from REST APIs. The infrastructure required to stream data from source to destination in milliseconds is vastly different from that required for request/response models of data exchange.

The API Streamer is built on Abyl's reliable, high-performance [Data Stream Network](#) distributed over 16 data centers and more than 175 edge acceleration Points of Presence (PoPs). We overcome the nuanced complexities and hidden edge cases of operating highly available, serverless realtime infrastructure at planetary scale so you don't need to.

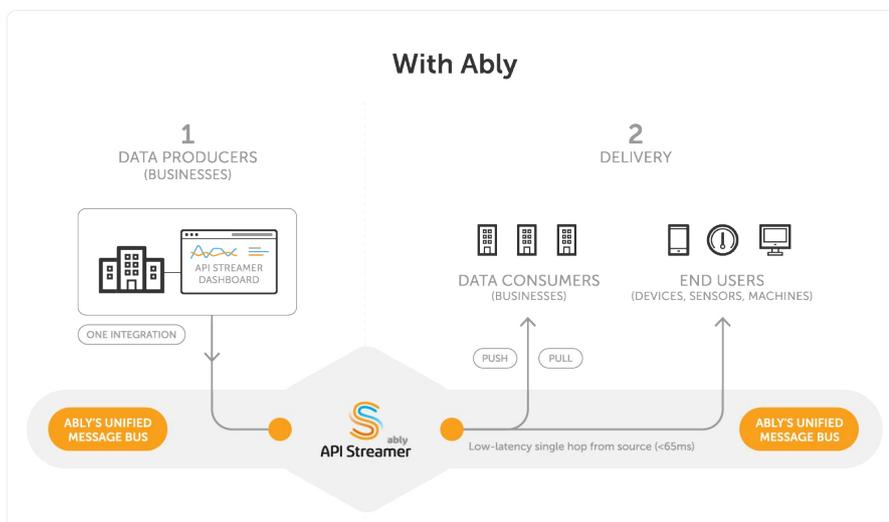
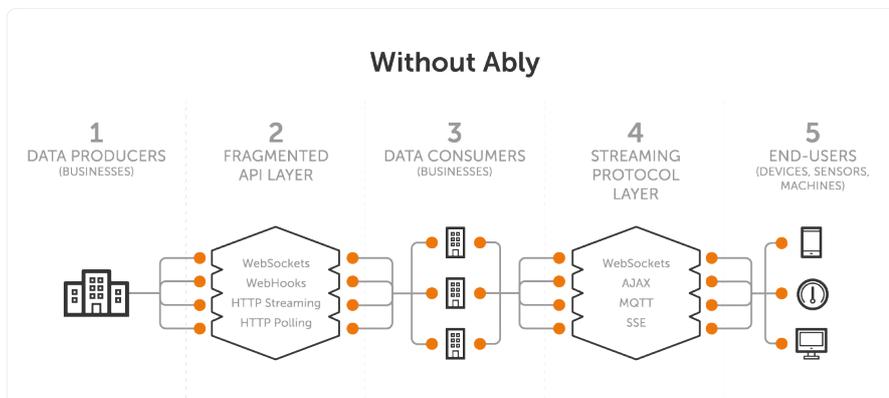
Thousands of developers rely on our network for end-to-end data streaming with absolute integrity of data and mission-critical reliability. No other network supports the complete data supply chain in this way. This dramatically reduces the complexity and time investment required to deploy and distribute data streams to third party developers.

Benefits continued

- ✓ **Streaming without limits**
API Streamer dynamically manages available global capacity so you only pay for what you actually use.
- ✓ **Ship and scope faster**
API Streamer is serverless so requires no infrastructure investment. Deploy with protocols of your choice so you can focus on your data, not your tech or distribution.
- ✓ **Optional end-to-end streaming**
API Streamer can stream data direct from source - such as an IoT device - right through to its destination, even as far as an end-user's mobile app.

Key features

- ✓ **Serverless, truly global infrastructure**
- ✓ **Reusable API integrations thanks to universal interoperability**
- ✓ **API management portal to easily manage all aspects your APIs**
- ✓ **End-to-end data streaming from source to destination in milliseconds**
- ✓ **Simple yet powerful APIs and 40+ SDKs developers love**
- ✓ **Data deltas for efficient streaming with reduced bandwidth costs**



Metra

"With approximately 290,000 passenger trips a day it is vital that Metra deliver real-time updates for train arrival information. With the tools made available by Abyl, Metra is able to deliver real-time data to customers quickly, dependably, and cost effectively, which prove beneficial for both Metra and Metra passengers."

Cherie Kizer

CIO / Metra

Native interoperability = reusable API endpoints

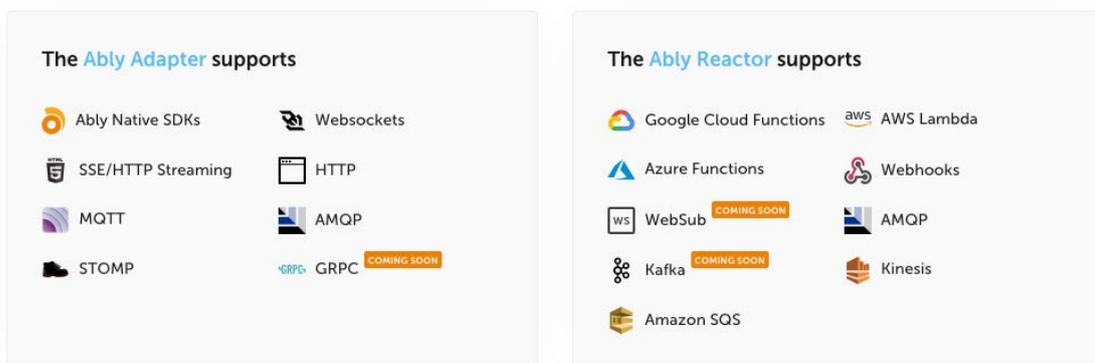
To serve different protocols, platforms, or languages developers would normally need to deploy a separate data stream for each. This generates extra upfront engineering cost and ongoing maintenance work. It also limits customer integration options which increases developer friction and can drastically reduce API adoption.

By providing interoperability between realtime protocols and platforms, API Streamer eliminates this barrier. Since API Streamer was launched, developers can deploy a stream once, using whichever protocol they wish, and create reusable API endpoints for an unlimited number of customers to integrate with. The API Streamer is able to do this by providing an adapter function that transforms source protocol to destination protocol.

Help consumers scale and builder richer features with APIs

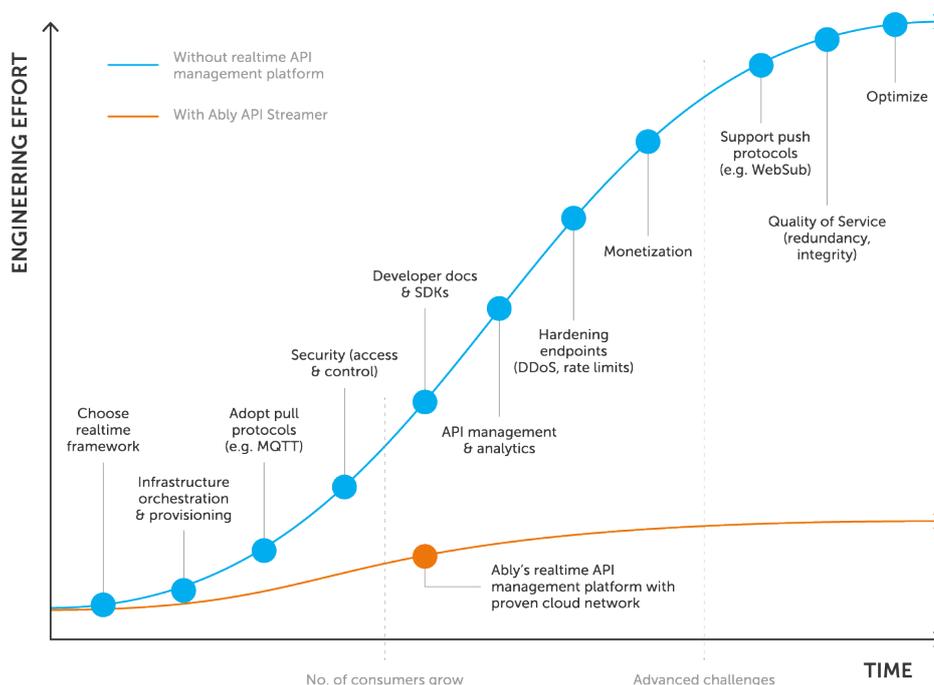
API Streamer also provides a reactor function, which links internal or external systems - be they legacy, hybrid, or cloud environments - to the Ably network. This provides the flexibility to use the services and compute developers are already working with, eliminating the need for you or them to build the integrations, operate and scale the required infrastructure for those integrations, all while ensuring minimum latency.

Consumers can queue and consume high volumes of realtime messages in bulk, transform or filter messages by executing functions on them, or pass messages on to other systems for onward processing. In short, Reactor brings compute and business logic to the edge of Ably's network so developers can seamlessly build rich realtime features and functionality without adding further complexity to your or their system architecture.



Endlessly scalable for fixed engineering effort

API Streamer frees developers from ongoing engineering effort and operational management associated with realtime APIs. Whether one or one million customers connect and consume your data with API Streamer, your engineering work and infrastructure cost remain predictable and constant.



If you're interested in how API Streamer can work for you, get in touch hello@ably.io or visit our website www.ably.io.