

# The Ably Adapter

The Ably Adapter eliminates lock-in and future-proofs system architecture. By providing native interoperability between popular realtime transport protocols the Adapter allows developers to do what they do best: build without worrying about infrastructure.



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In a fragmented ecosystem of realtime protocols, universal protocol interoperability is essential for avoiding lock-in and building scalable applications and APIs.

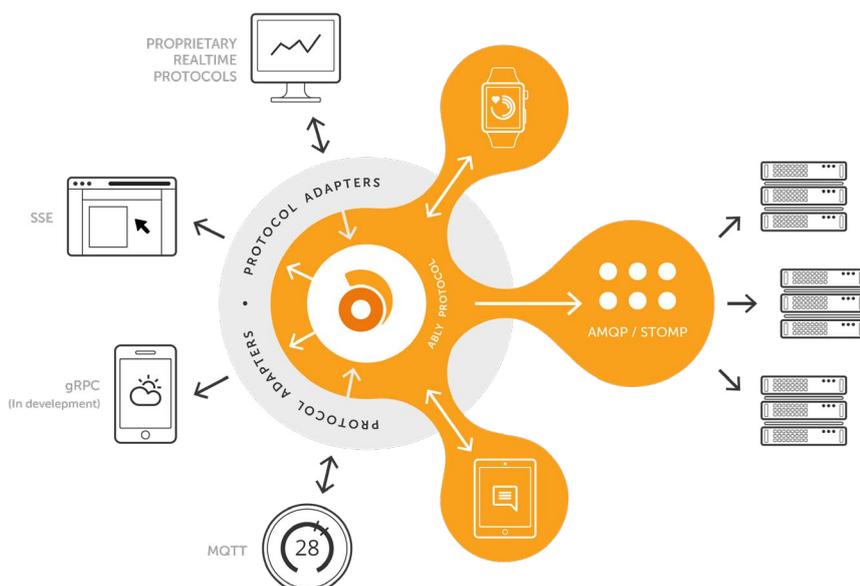
You might be using one or two protocols right now to great effect. But as new protocols emerge and the demand on your apps and APIs changes and grows, you'll find interoperability between old and new protocols introduces engineering complexity, uncertainty and, ultimately, unknown cost. With no universally-agreed industry standards as of yet, this will be unavoidable. The Ably Adapter solves this.

## Complex integration infrastructure at your disposal

A core aspect of Ably's realtime messaging fabric, the Ably Adapter ensures interoperability between the Ably protocol and other realtime protocols - including proprietary protocols of other realtime infrastructure providers.

The Adapter acts as a protocol translation middleware layer between your devices and Ably's [Data Stream Network](#). It ensures all incoming client requests are transformed into the Ably Protocol and sent on to the Ably network. All received data is then transformed into the protocol of the destination client and delivered through the Ably network. Thanks to Ably's stateful design we're able to ensure requests are always routed to the correct adapters and client destinations.

This allows developers to seamlessly switch between protocols so they can use the best one for their specific task at hand. As advocates of an open internet and proponents of open protocols as industry standards, we want developers to use the best protocol for them - not one dictated by us.



## Benefits

- ✓ **Future-proof system architecture**  
Rather than build complex infrastructure to accommodate existing protocols, you can rely on the Ably Adapter to provide protocol interoperability for protocols now and any new ones that emerge in the future.
- ✓ **Gain engineering freedom**  
Use the right protocols for a particular device or use-case without worrying about compatibility further along the data supply chain. Data sources can effectively be decoupled from their end destinations.
- ✓ **Zero lock-in**  
Proactive support for open protocols and a commitment to an open, high-powered internet means zero risk of vendor- or protocol- lock-in now or in the future.
- ✓ **Scale and adapt seamlessly**  
Ably can accommodate any amount of engineering and business growth that might change protocol and streaming requirements. For example, adding new protocols to consume data from different devices.
- ✓ **Refocus on core engineering goals that move the needle**  
Developers are freed from ongoing infrastructure work so they can refocus on engineering problems that really matter.
- ✓ **Easily migrate to Ably from other realtime infrastructure providers**  
Migrate to Ably in as little as a few hours with only a small number of simple configuration changes. Ably does the rest.

## How is the Adapter used?

Our customers use the Adapter in three ways.

First, to migrate from legacy or proprietary systems in a progressive way. The Adapter achieves this by supporting existing protocols. During the migration to newer protocols or the native Ably protocol, our customers can continue to use legacy or proprietary protocols they're migrating from.

Second, when a wide array of devices or third party systems need to connect into a single realtime messaging layer (or messaging bus) but may not be able or willing to adopt the native Ably protocol. For example, customers working with IoT devices might primarily use open and more focused protocols, like MQTT, to stream data bidirectionally in a more battery- or compute-efficient way. In other scenarios the Ably protocol is used where a more feature-rich realtime protocol and SDK is needed, with the Adapter providing interoperability. Many of our customers choose to build on Ably because we allow them to completely avoid lock-in.

Finally, the Adapter helps customers future-proof their technology stack. Ably not only provides a best-in-class realtime messaging infrastructure layer but is also [committed](#) to supporting new realtime protocols as they emerge.

## Simpler architecture and reduced engineering complexity

To achieve this degree of seamless cross-platform connectivity in-house, organizations would need to focus additional engineering resource on the already-difficult task of streaming data between devices.

Growth-focused organizations tend to offload this heavy infrastructure burden. Opting to stream data with Ably's Data Stream Network they gain out-of-the-box interoperability at no extra cost. And they're able to redeploy resources into their core engineering problems.

## Scalable, future-proof engineering

As engineering teams grow and businesses mature the number and types of protocols needed can change. Constantly building support for new protocols constitutes a heavy engineering burden. Ably's realtime messaging infrastructure layer accommodates ever-evolving realtime protocol requirements without ever leading to lock in.

The Ably Adapter gives engineers freedom to develop in numerous directions, according to their needs. It simultaneously simplifies system architecture while reducing overall infrastructure investment. And, when combined with the Ably Reactor, provides a truly interoperable and future-proof realtime infrastructure layer.

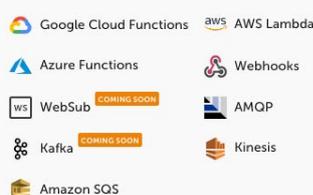
The Ably Reactor provides data stream processing pipelines to stream data from Ably into your existing in-house or third party systems, clouds, streaming, or queueing services. This gives you the flexibility to use your existing compute to run code, process and transform data, and execute functions - all in realtime. For our customers it often goes hand-in-hand with the Adapter.

## Supported protocols

### The Ably Adapter supports



### The Ably Reactor supports



## Key features

- ✓ Future-proof system architecture
- ✓ Makes migration to Ably easy
- ✓ Stateful adapters ensure correct protocol delivery
- ✓ Growing number of protocols with seamless interoperability between supported protocols
- ✓ Compatible with the Ably Reactor, allowing data to be streamed into third party streaming platforms, clouds, and legacy systems
- ✓ Built on Ably's battle-tested, globally-distributed Data Stream Network

## Key numbers

< 1/10

second latency worldwide (<100ms)

Billions

of messages sent each day

100s of millions

of messages per second network capacity

30,000,000+

monthly end users

7,500+

developers building on Ably



"Choosing Ably was an easy decision. Their technology platform offered unique features combined with scalability and performance which shaped how we build our gaming infrastructure and realtime features. As from the beginning we knew we could rely on Ably as we grow, their pricing supported our growth, and their team deeply understood our technical challenges and helped us at every step along the way."

**Sam Jones**

CEO / Ballr