



# APIs 101

Code little. Win big. The simple technology creating big business value.



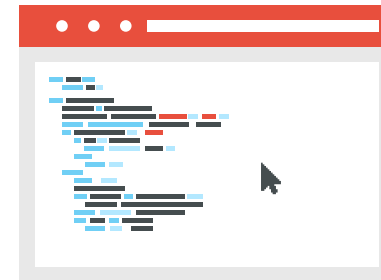
bandwidth

## The ABCs of APIs

An API is an *Application Programming Interface*. APIs are used by applications to send and receive information to and from other applications. A more descriptive term for these handy programming tools is webhook, which tells you what you need to know: APIs let programmers ‘hook’ applications together.

For example, if a programmer writes an application that needs to include the latest information on delayed flights into Raleigh-Durham, he can get that information from the airline. He doesn’t need an API to get it; he can write an application that can read the airline’s site content just like a human would. But if the airline changes its site’s code, then the programmer’s application is going to break.

And that’s where APIs come in. An API lets applications ‘talk’ to each other-i.e., send and request information and services—based on a protocol.



## Protocols

A protocol is a set of rules that tells data how to behave. In the case of software applications, one application uses a protocol to tell other applications how to communicate with it.

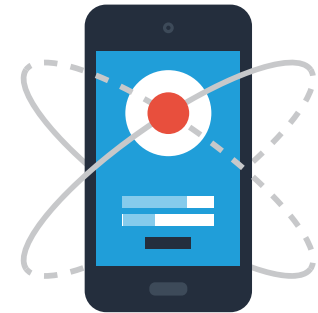
Think of a convenience store with a sign on the door saying ‘No Shirt, No Shoes, No Service’. You know the rules—wear a shirt, put on some shoes, and you can get your frosty soda. That’s the store’s protocol.

<sup>1</sup> Cellular Telephone Industry Association (CTIA), Pew Research

The protocol lets the airline's app tell other applications how to communicate with it. Once that communication is established, third-party applications can access a set of commands contained in the airline's app.

For instance, maybe the airline has a chat service that lets travelers contact the airline's help desk. The airline can create an API that lets third parties—like our programmer in Raleigh-Durham—use that chat service on their own sites. The third-party programmers are saved from having to write their own chat service apps.

That's just one example of how APIs enable one application to leverage the services of other applications, which saves a lot of time and effort for programmers and helps businesses deliver better customer service.



## Integration is an old-school problem. APIs killed it.

Long ago in technology terms—about 15 years—businesses struggled to get their systems to share data and services. Even adding a fairly simple software program to an environment could involve lengthy rounds of due diligence, meetings with project managers and database administrators, and a lot of fear, uncertainty, and doubt. Would the new product integrate with the legacy system as promised, or would there be an ‘unforeseeable problem’?

Nobody talks about integration anymore. We take it for granted. Of course applications will interface properly; why wouldn't they? They're all at least partially web-based and built on standard protocols. They're practically cousins. All they need to share information and services is a good API.

## Grow your business with APIs

Today, businesses are moving toward IP-based solutions that blend traditional services, native network services, and useful app functionality.

Bandwidth's APIs help application developers integrate a rich assortment of services that enhance the customer experience and increase the marketability of their apps.

Bandwidth APIs let you enhance your apps with automated functions that would have once required specialized telecom expertise or costly consultants to make possible. A small program that takes little effort to write can automate the processing of tens of thousands of numbers. From origination to call termination, APIs reduce manual processing and make managing your telecom services simple.

- Order and allocate phone numbers
- Handle incoming and outbound calls
- Assign SIP trunks
- Set up and control call routing
- Manage accounts and orders
- Port in numbers
- Get a number's history
- And more

And APIs do more than shorten development cycles and provide access to advanced functions. APIs today drive business.



## Communications services are easy with APIs

- Voice
- SMS
- Payments
- WebRTC
- And more

## APIs belong in the boardroom

APIs are no longer the realm of the IT department alone. They are business drivers, fueling up to 90% of the revenue of companies like Expedia, according to Forbes. Companies like Uber and AirBnB are creating enormous value with few capital assets through the smart use of APIs, and mobile app stores earned \$15 billion in revenues in 2014. Even companies that don't sell stand-alone apps are increasing their value by using APIs to shorten development cycles, improve the customer experience, and amplify the value of partner offerings.

By 2025, more than 25 billion devices will be connected to the Internet of Things.

APIs will be driving those connections.



## How Your Business will use APIs to Create Value

- Build big data repositories of customer behavior
- Use that data to predict future behavior
- Expand the scope of your ecosystem with symbiotic partnerships
- Build a competitive advantage by letting your customers connect with your business departments, your partners, or each other

*—The Harvard Business Review*

## Bandwidth makes APIs even easier

Now any company can build business-grade apps with speed and ease. Bandwidth makes it easy to get started with our full range of cloud-based API services.



### Develop apps in the cloud

Access Bandwidth's robust nationwide network through a simple dashboard to easily launch and scale new apps. You don't have to worry about the complex infrastructure and the deep technical knowledge—we've put all that on the cloud, so you can incorporate fully functional communication services into your app while you shorten development time, lower costs, and get to market faster.



### Use the Bandwidth App Platform

Bandwidth's App Platform runs on our own network, creating the perfect marriage of platform and infrastructure. You get the best customer experience for a lean cost, and all the help you need to bring your app to market. The App Platform includes a reference app, how-to guides, mobile clients, and much more. And if you still need help, just give us a ring. Our developers are on call to lend their expertise to your project.



### Launch faster with an SDK

We've pre-written the APIs that you're most likely to want to use. For example, maybe you want to order a phone number—there's an API for that. But the API will have to include a long complicated phone ID address that would have to be modified every time you changed any information associated with that number. Your developers would normally write a program to modify that URL automatically. But Bandwidth wanted to save you the effort, so we developed a software developer's kit (SDK) that does the work for you. Your developers can just grab our SDK and drop an advanced functionality into your app with almost no effort.

## APIs are a business essential

You don't have to be able to program an API yourself to see how you can use them grow your business. All you have to know is that APIs make it easy to bring the power of voice and messaging into your apps with little effort or expense.

Businesses of all sizes can use Bandwidth's Cloud Services to access APIs through a convenient dashboard, making it possible to automate telecom tasks and deliver better customer experiences.

Build a better app with APIs. Build a better business with Bandwidth.



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**How can your business use APIs to grow faster and win bigger?**

Contact Bandwidth today 844.299.0028