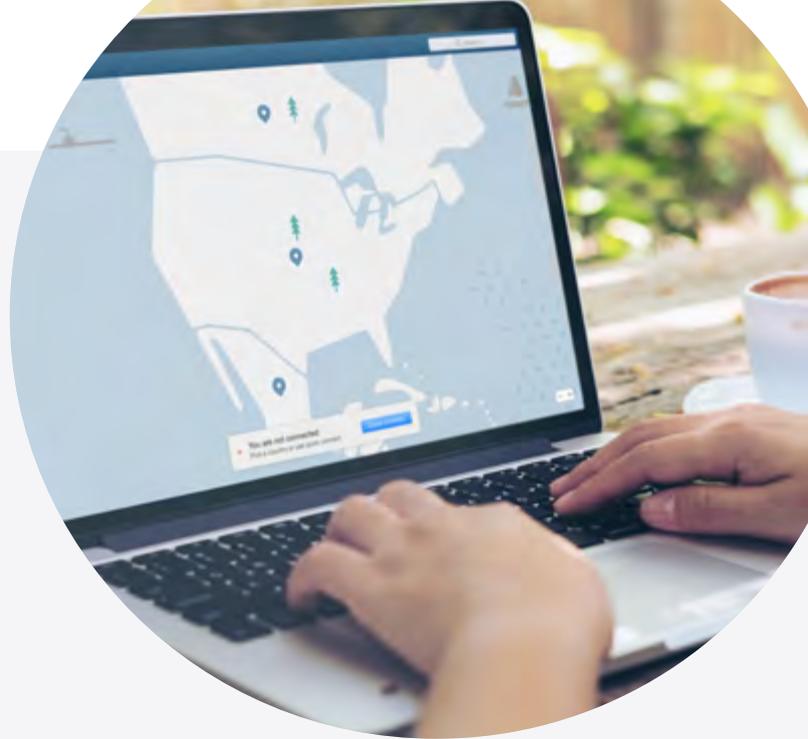




THE BBD BOOM GUIDE TO

HubSpot API development for non-developers



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Introduction

API development can sound like a difficult concept. But even if you're not a developer, it's beneficial to your business if you're able to understand a little about how API development works. That's because it can be used to form highly advantageous integrations between the various applications that your business works with.

These integrations are the foundation of many of the sales and marketing automations that greatly increase productivity and efficiency. Inside this guide, you will learn:

- What an API is, including where you've probably come across the benefits of API before.
- What a webhook is and how it's different from an API.
- When to use a webhook versus an API.
- What the HubSpot API is all about and why it's great to integrate with.
- What types of integrations you can form with HubSpot.
- The difference between native integrations, third-party connector integrations, and custom integrations.
- The limitations involved in working with the HubSpot API.
- Ways to get around HubSpot API limitations.
- The various APIs within HubSpot API and what they can do.

Keep reading to find out more about how API development works, what you can do with it, and how to get help with your development project.



What Is an API?

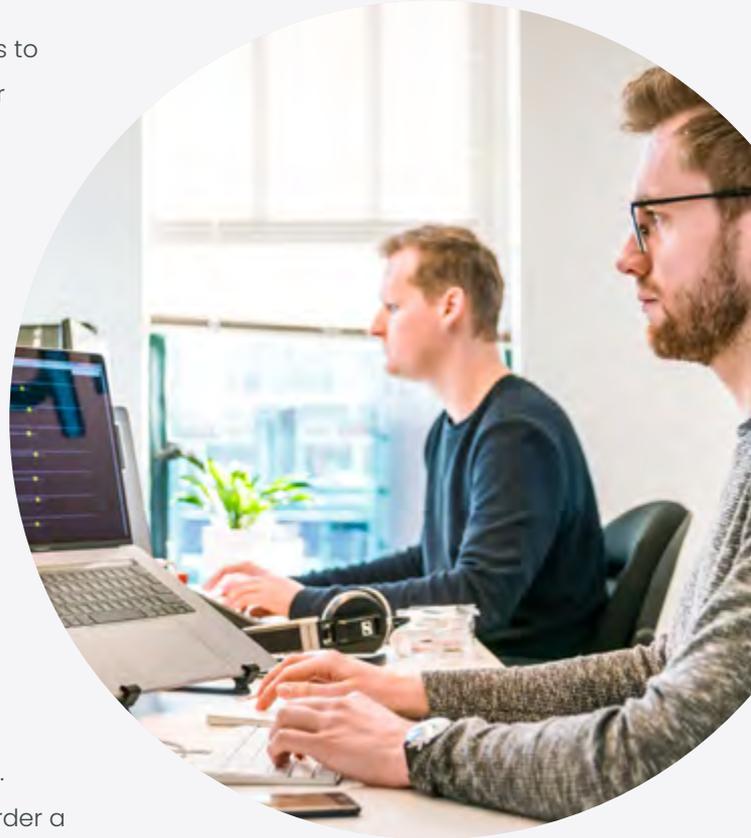
API stands for application programming interface. In plain English, it's simply an access point that allows multiple applications to talk to each other, and thus integrate.

An API is a set of functions and procedures that allow apps to access features or data from another operating system or application. API is an excellent tool for building software that works in a cloud environment with shared data.

So an API, like the HubSpot API, can access information from various databases. The reason this is useful is it means you can complete an action for a separate app without leaving the website you're currently on. Although developers are the ones who typically work with APIs, they have huge benefits for businesses and end users because they increase connectivity – something that is increasingly useful in all aspects of business and communication.

Even if you don't entirely understand what API is or how it works, you have definitely seen it at work in your daily life. Any time you make a reservation online, book a flight, or order a product from a website, you've been able to do so thanks to API. It's the behind-the-scenes component that makes all the applications and devices we use able to connect with each other.

Basically, it's a messenger between software, sending and receiving requests and responses. But the messages are intended to be between one programme and another, rather than between people.





YOU CAN THINK OF AN API LIKE THIS:

You are sitting at a table in a restaurant, with a menu in your hands. A server comes up to you. They communicate your order from the menu to the kitchen, where the order will be prepared. The server sends information from your table to the kitchen (a request). And then they bring the food from the kitchen back to your table (a response).

In this scenario, the server is performing the function of the API. They are the messenger relaying information between you and the kitchen staff. Perhaps you can see now how this function is so important to many of the applications we use today. So many of the systems and apps we use interact with each other, like when you utilise a social media management platform (Hootsuite, for instance) in order to post content to all of your social media accounts from one dashboard.



DEFINITION

API: (Application Programming Interface) A behind-the-scenes messaging system that allows requests and responses to be sent between one programme and another, allowing applications and devices to interact.

What API has to do with connecting apps

API integrations connect two apps (in this case, HubSpot and something else) so that they can automatically transfer information between their data systems. This allows various team members to be better informed and make better decisions based on the data provided at your business.

How does the information get transferred? Data is sent over the internet using APIs. APIs are application programming interfaces, and they are software that works behind the scenes to send and receive data over the internet.

Integrating HubSpot with the CRM is the most common usage of integration. But there are many other possible integrations, such as finance systems (syncing invoice information), ecommerce systems (syncing delivery information), and mail service systems (syncing campaign information).

Here's the thing. Your marketing and sales teams likely have a dozen or more different tools they use regularly. That's crazy. And confusing.

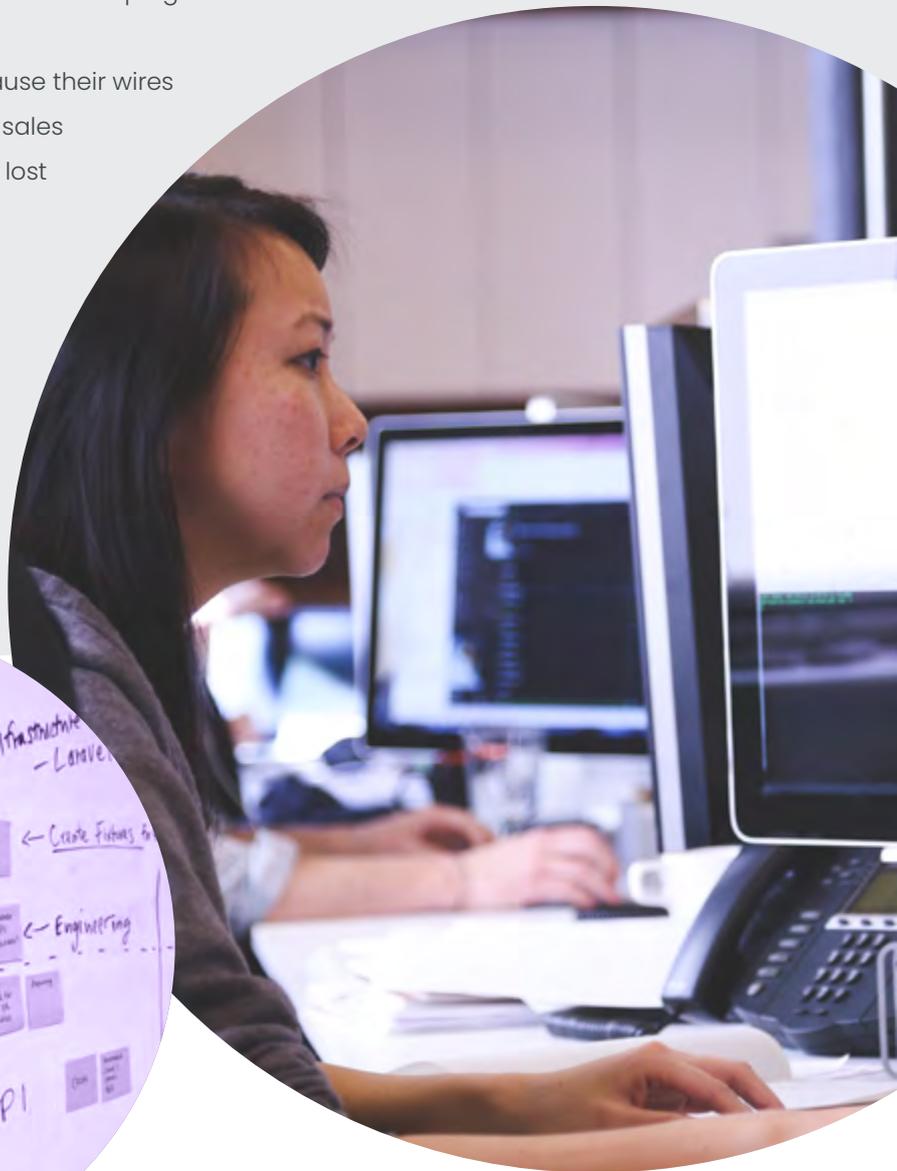
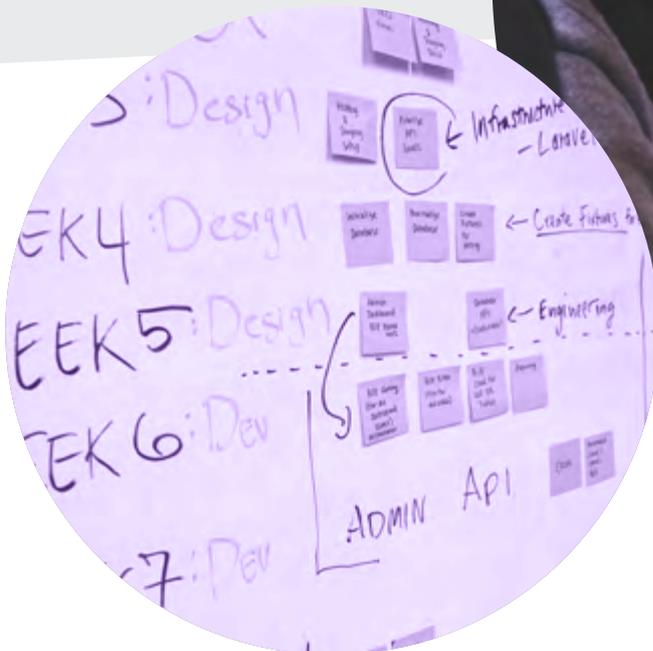
If you're like most companies that haven't implemented an inbound marketing automation solution, you'll find that your teams have a lot of inefficiencies in place without any way of easily remedying them.



For instance, these are some of the scenarios your teams may be struggling with:

- They're uploading various spreadsheets between different apps.
- The sales team and marketing team are not on the same page about data and how to use content.
- Marketing is generating leads that the sales team doesn't have enough context about or they don't know how to utilise their tools for converting those leads to sales.
- The lead reports you are generating from HubSpot aren't populating correctly.
- When marketing wants to run a campaign, it takes weeks to get the right data and segment it.
- Marketing doesn't know how to personalise campaigns for particular customers.
- Marketing and sales are at odds because their wires are getting crossed when it comes to sales qualified leads, and lead attribution is lost when leads go to the CRM.

HubSpot is an amazing tool that can really cut down on all the separate tools your team has to use and reduce those inefficiencies. And utilising it to its full capacity is the ultimate win for marketers and salespeople.



What is a webhook?

Webooks take the convenience of API a little further. They are automated messages sent from apps when a particular event happens.

Let's look at the restaurant analogy again. After you order your food, let's say the server brings over a set of utensils for you. The utensils are the webhook – an automated response that occurs after a particular event. In this case, the event that triggers the response is you ordering food. The message sent by a webhook is called a "payload," and it is sent to a unique URL.

In a realistic scenario, it looks something like this:

1. A customer puts a product into an online shopping cart on your ecommerce site and checks out.
2. A webhook tells the ecommerce app that it needs to notify your invoice app.
3. The ecommerce app sends a message with the order details via your invoice app's "webhook URL."
4. When a message is sent to the webhook URL, it notifies the invoice app.
5. The invoice app automatically makes a new invoice for the customer's purchase.



What exactly is the benefit of webhooks and how is this different from how apps normally interact with each other?

The difference is that previously, the app would have to check at various intervals for incoming information. It wasted time and resources by checking and waiting. With webhooks, the app doesn't have to check for anything because it gets notified in real time as soon as an event happens. That speeds up the automation process.



DEFINITION

Webhook: A user-defined callback that sends data and executable commands from one web app to another, triggering a response from the receiving app when certain events occur in the first app.

Basically, webhooks are another way to connect two applications. When an event happens on the trigger application (the first application where a user inputs data), that data is sent to a webhook URL for the action application (the application in which you want something to happen based on the data from the first application).

Additionally, the action application typically sends a callback message to the trigger application, letting it know if the data was received successfully or not.

Keep in mind that all of this is happening within the software. They are not notifications being sent to people. Webhooks are kind of like a simpler version of APIs. APIs are a full connection for adding, editing, and retrieving data between two apps. They sync large quantities of data. A webhook, on the other hand, is just for one specific part of an app. You could have a webhook set up just for contacts, for instance, so that when a new contact is added, the app pushes the data to another application's webhook URL.

What's the difference between webhooks and API?

Both webhooks and API facilitates the syncing of data between two applications, but they're not used for exactly the same things. For one thing, API typically works with data in quantity, whereas webhooks are one-off exchanges.

So when do you need webhooks? And why do you need them at all if your systems are already synchronised with API? Webhooks are best used for information that you need triggered in real time.

Although API requires a request to be sent in order to function, API integration is typically set up to sync (send a request) at regular intervals. That means it keeps things up-to-date as frequently as you're likely to need it. But it is not a real-time trigger.

So while API integration between various apps is absolutely essential to your automation process, you'll likely also want to set up a few webhooks for certain functions that need to be automated in real time to generate a response action. As with most real-time systems, webhooks are most often used for smaller tasks and requests. They are more specific than API integration.

You should note, however, that webhooks are not better or worse than using API for data requests; they're just different, and they're used for different purposes.



One reason why you should not set up everything with webhooks is because you won't know right away if there's an error with your webhooks. With API, you'll know if the sync didn't happen when it was supposed to, but if your webhook goes offline, it just looks like you haven't received any updates for it to notify the system about.

You also have less control of data flow with webhooks versus API. So just make sure you use the solution that's right for the given situation.

Here are a couple examples of webhooks:

Many Zapier "zaps" are webhooks.

When you connect two apps with Zapier, you are often able to link up a trigger in one app to cause an action in another.

Stripe has a webhook to automate email.

When a customer's payment doesn't go through as expected, the app automatically sends an email to let them know.



API, conversely, works well when you have constantly changing data, such as integration between your marketing automation tool (like HubSpot) and your CRM. Those apps regularly need to be updated with new contact information and opportunities.

Another example of when an API is necessary would be an ecommerce platform that needs to update shipping and tracking data.

For a specific example of API in action, Slack (the communication app) uses API integration so that you can use their messaging features in other third-party apps. Similarly the HubSpot API can integrate its marketing tools with many other business applications.

If you're not sure whether you should be using webhooks or API for a given task, talk to us at BBD Boom. We'll help you determine what solution is right for your problem.

What is the HubSpot API?

As with other APIs, the HubSpot API is a system that sends messages between various apps and devices, allowing them to interact with one another.

The HubSpot API is built specifically to help users quickly create function integrations between applications. There are a few ways HubSpot is able to do this.

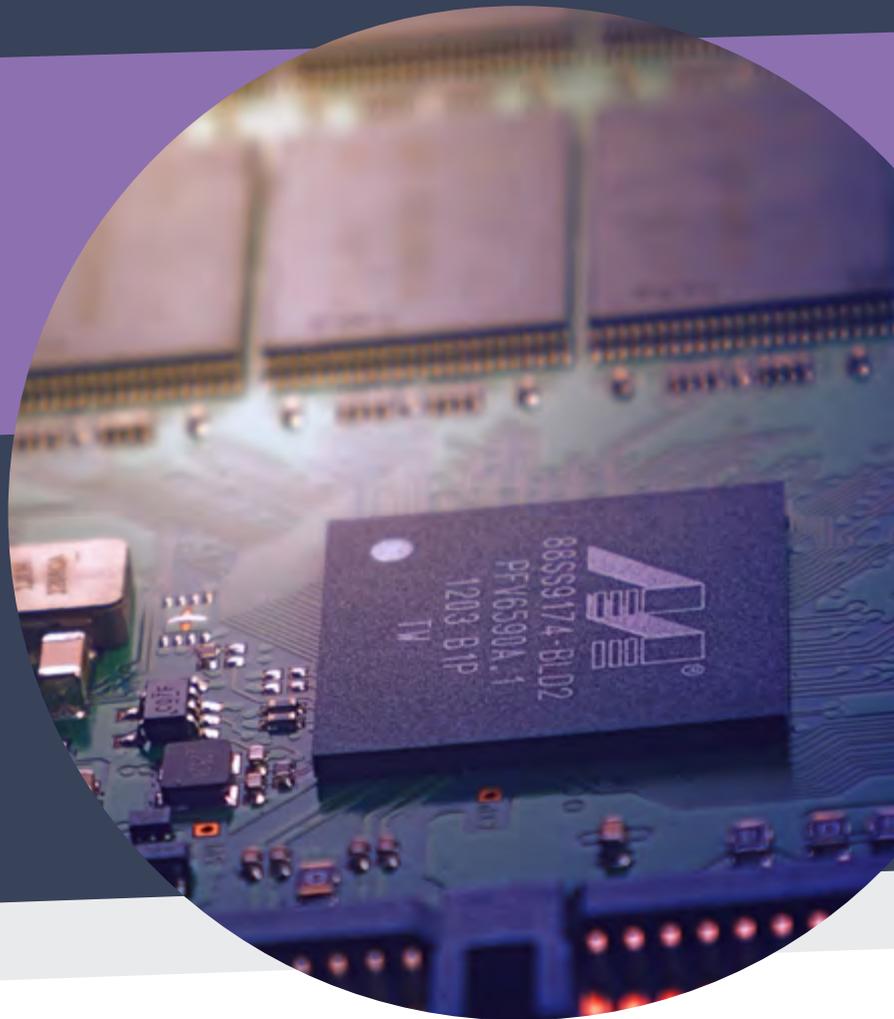
For one thing, HubSpot API is an open-source software. This means that anyone can view the source code for the API and can use the code to make modifications based on it.

DEFINITION

Open-source software: Software for which the original source code is made freely available and may be redistributed and modified.

Because they have access to the original code, developers are able to create API integrations that work as go-betweens for HubSpot and other applications.

Once HubSpot approves the integration code, the connection is available on the HubSpot Marketplace.



Users — even those with absolutely no technical knowledge — can then integrate the two pieces of software with the click of a button and the filling in of a few simple fields. New integrations of this kind that are directly between HubSpot and another app are called native integrations. To offer native HubSpot integration for commercial use, you can apply to get certified and be featured by HubSpot.

But because of its open-source nature, developers don't even have to go through HubSpot and get an official certification for integrations with HubSpot tools. Instead, they can act as a third-party connector and offer the integration through their website. These are called connector integrations. They take a couple more steps for the end user than a native HubSpot integration, but they still don't require users to know any code at all to get an integration between the marketing tools and any number of applications they may use.

And for companies wanting to offer a third-party connector integration, you don't have to go through the hoops of getting certified by HubSpot. HubSpot itself has hundreds of native integrations available, and with the options from third-party connectors, there are literally thousands of possible integrations that take almost no tech knowledge at all. It's simple.



Here are some examples of what API integrations can do:

- Copy new lead responses from Facebook Lead Ads to a HubSpot form.
- Send new Google Contacts to HubSpot.
- Send new HubSpot contacts to Google Contacts.
- Create or update HubSpot contacts from new MailChimp subscribers.
- Add new HubSpot contacts to a MailChimp list.
- Create or update HubSpot contacts for new Typeform entries.
- Save new HubSpot form submissions to a Google Sheets spreadsheet.
- Get Slack notifications for new HubSpot form submissions.
- Log new Intercom users in HubSpot.
- Create HubSpot CRM contacts from scheduled Calendly meetings.
- Add contacts to Hubspot CRM from new Gravity Forms entries.
- Add or update HubSpot CRM contacts from updated rows on Google Sheets.
- Use HubSpot to improve keyword and on-page SEO.
- Simplify the placement of lead generating forms and split test versions.
- Utilise HubSpot's custom pop-up forms on your site.
- Track and nurture leads that are generated from your site, all within HubSpot.
- Track the performance of the CTAs (calls to action) on your site.
- Embed the HubSpot contact form on your "Contact Us" page so that you can get instant notifications to follow up with a lead.
- Get HubSpot tasks sent directly in Slack, so you don't have to switch back and forth between tools.
- Send GoToWebinar contact information and attendee engagement data for the webinar attendees to HubSpot. You can also use HubSpot forms to get more attendees signed up for your webinars and collect data in the process.
- Use the data from SurveyMonkey to segment and qualify leads in HubSpot.
- Use ZenDesk for syncing emails to the support team with your HubSpot data.
- Collect new leads and track which contacts are registering for and attending the events you host through Eventbrite.
- Connect Zapier "zaps" to utilise even more vetted connector integrations with HubSpot.



HOW DO YOU MAKE THESE AMAZING THINGS HAPPEN?

You integrate an app, such as Facebook Lead Ads, Google Sheets, MailChimp, or nearly any other online app you use, with HubSpot..

Of course, there are cases where you can't find what you need either through HubSpot partners or through third-party developers. In that case, end users will need to find developers who will create a custom integration for the application.

How do you know if your chosen software can be connected? As long as the software system you are using has an API, you can integrate it with HubSpot. Fortunately, most online systems meet that qualification. You can confirm this, though, by going to their website and looking for API documentation or developer documentation.

Of course, you can also contact someone at their company to find out. Or reach out to us at BBD Boom, and we can assist with researching your software's API.

If the software you work with doesn't have an API, then you'll need to form another plan for extracting its data – an integration with HubSpot won't be possible. But it is highly recommended that if you're working with such a system, you consider transferring its data to an updated system with API so that you can take advantage of automation possibilities.

Another advantageous aspect of HubSpot API is that it is RESTful API. If you're not a tech person, you may not be familiar with the term but basically it means that the software is organised around the REST (Representational State Transfer) concept. REST is a software architectural style that utilises web resources through HTTP requests by breaking transactions down into a series of small modules.

Now, that may not mean much of anything to you, but what it means for any API integrations you utilise is that it will be compatible in the majority of cloud computing situations.





The benefits of HubSpot integration

If you've ever had to manually collate data from spreadsheets, then you know the worst-case scenario of data syncing. The good news is that it doesn't have to be that way anymore. The technology is available to let your systems collate information automatically, and there is no reason you shouldn't take advantage of that.

Here are some more detailed examples of the benefits of HubSpot integration:

- **Reduce errors from manual data entry.** Instead of your team having to spend time on data input, information can be captured from forms and synced within multiple apps.
- **Increase web traffic to your site.** HubSpot has a ton of inbound marketing tools. You can use them to improve on-site SEO.

- Keep people apprised of the information they need to do their jobs.**
When marketing makes a note about a qualified lead or updates the lead's information, sales can be aware and act on those changes because they're getting the same information in the marketing system.
- Improve decision making abilities within sales and marketing teams.**
Once people have all the information, they can also analyse the available data to know what's effective and where they should be putting the most energy and resources.
- Save time and money versus manually adding and updating records.**
In some cases, you can quite literally save weeks of administrative work by automating a single process. Once this time is freed up, your team members can work on tasks that actually require their attention, rather than mundane administrative tasks. (They'll be happier about that, too!)
- Spot stale data more easily.** When your systems are synced, the data is more comprehensible, and you'll know when leads have gone cold.
- Improve lead conversions.** Multiple studies have shown that response time on a lead is crucial to converting to a sale. But if sales doesn't have the information they need, then their response is delayed. Integrating marketing and sales systems reduces this delay and makes it easier for sales to convert leads.

With HubSpot and CRM integration, leads from inbound marketing are sent to sales in realtime. This means you'll get near — instantaneous syncing of leads. In fact, HubSpot's marketing tools automate lead entry. It's really helpful to automate the lead flow process like this because it prevents your marketing team from having to manually enter leads into the system.



- **Your team saves time, meaning they can pay attention to more important things.**
Instead of manually entering tasks, the marketing team only has to check occasionally that entries are accurate.
- **There are fewer errors in your data.** Because the data input is automatic, you reduce manual entry errors. Though an error could still occur when a lead fills out a form, the input of the data via integration will be accurate to what was submitted.
- **You can improve marketing plans and increase marketing ROI.**
The marketing team benefits from seeing what happens to their leads on the sales side. When your marketing tools at HubSpot are integrated with the sales info on your CRM, marketing learns valuable information about which leads turn into sales. That helps them form better marketing and budget plans.

Basically, with the right integrations, you get closed-loop reporting, so that sales outcomes are tied back to your marketing initiatives in realtime. That allows you to see which marketing channels can be attributed to the most revenue, allowing you to do more of what works and less of what doesn't.

Additionally, the contact details in the CRM system can also be used to inform your marketing strategy.

The CRM is typically the central hub of all your customer data. Many companies also send a lot of data from third-party systems into the sales database, such as demographic data or behavioral data about the use of your product or service. It gives a more holistic view of the prospect or customer.

But when you send this data back to the marketing system (HubSpot), your marketing team can make more personalised campaigns for leads. And that definitely improves marketing results with better nurturing communications, such as email.

Integration allows you to automate many of your sales and marketing operations by using HubSpot's additional inbound marketing tools. It allows your team to automate workflows between apps instead of taking extra time to make multiple entries and move data around manually.

Ask yourself if your company uses any interconnected systems in day to day operations. Most likely, the answer is yes. And if you're using multiple systems in your inbound marketing process, then it's important to integrate them to reduce costs and get better conversion results.

What are the limitations?

HubSpot does have some limitations to how much of their public APIs you consume with a single integration. The reason behind this is so that end users get a quality experience through the application.

You see, the public API endpoints are powered by the same underlying technology that powers the core HubSpot application.

If you are getting a custom integration developed, you will need to make sure the integration doesn't use up more requests than allowed within a given time frame.

Here are the current rate limitations based on the product tier you pay for on HubSpot:

- **Free and start tiers**
Burst limit is 100 requests per 10 seconds.
Daily limit is 250,000 requests.
- **Professional and enterprise tiers**
Burst limit is 100 requests per 10 seconds. Daily limit is 500,000 requests.
- **API add-on at any tier**
Burst limit is 120 requests per 10 seconds. Daily limit is 1,000,000 requests.

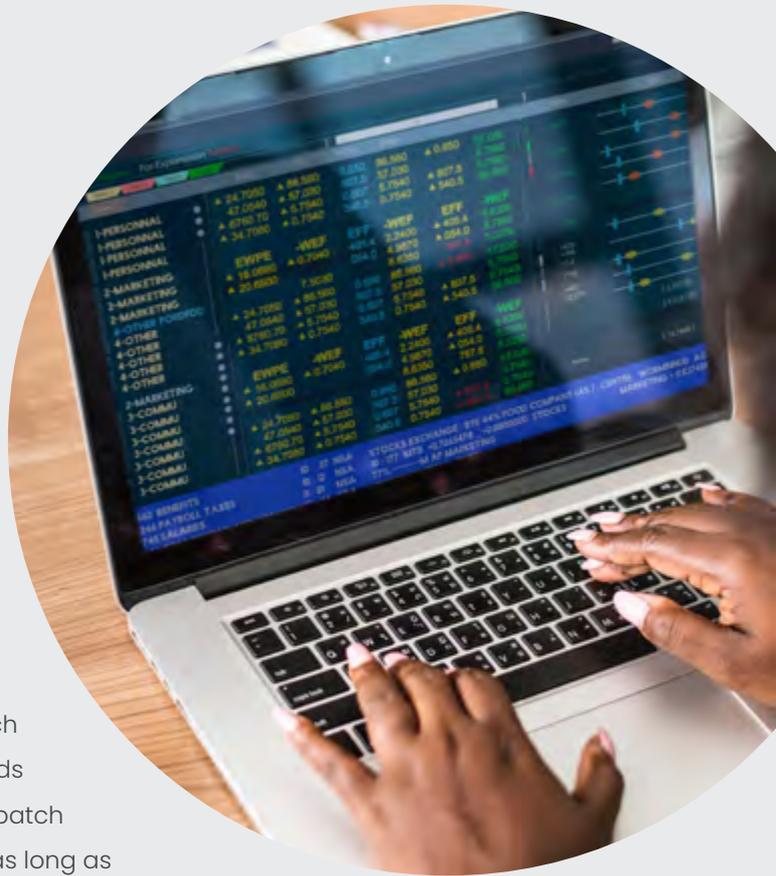
If your integration exceeds either of the limits at its tier level, an error response will be generated.

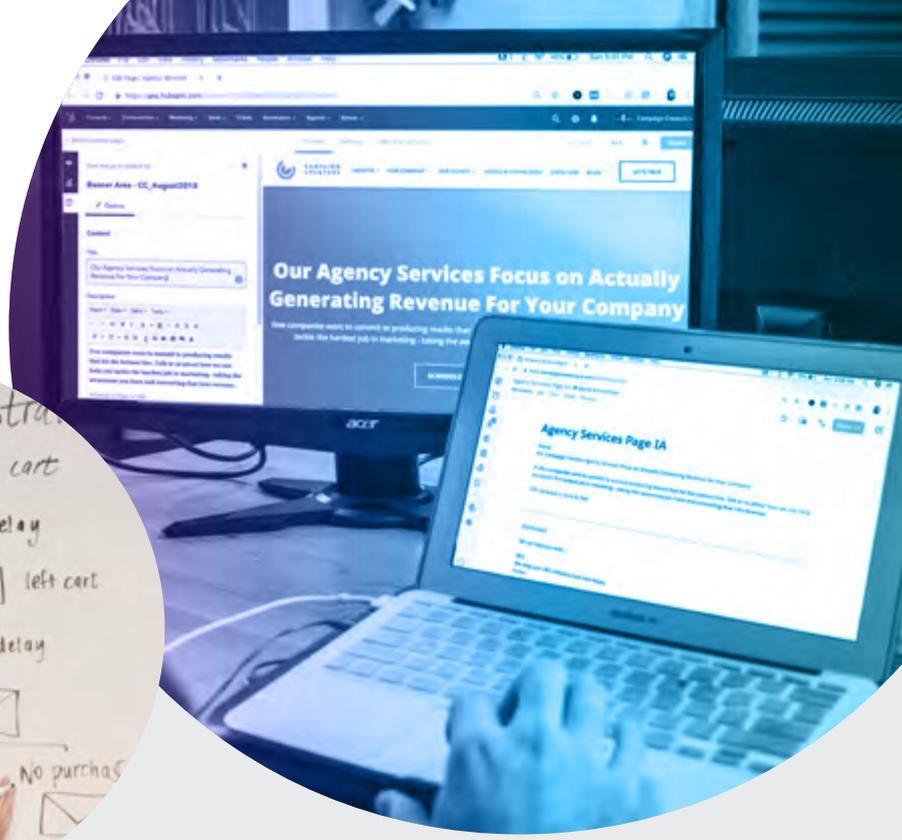


There are, in fact, a few ways to help your integration work within the limitations:

- Cache data for repeat requests.** If the application you are connecting with HubSpot uses data from HubSpot on each page load, you should ensure that the data is cached – and then loaded from that cache – instead of being requested from HubSpot API every single time you need to call the data.
- Use batch APIs when it's possible.** To save on requests, you can send certain types of requests in bulk. This is particularly useful in the case of working with contacts. You can use Batch API to update contacts in sets of up to 100 records per call. Just group the updates into a periodic batch update instead of updating individual records, as long as you are not working with time-sensitive data.
- Utilise workflow starting conditions.** You can set workflows to be automatically triggered based on certain starting conditions. This way, new or updated contacts are enrolled in the workflows automatically, without having to update a record and manually enroll the record in the workflow in a separate request. This cuts down on the overall number of requests sent through the API.
- Take advantage of webhooks.** Webhooks were discussed in the earlier section, “What is a webhook?” These are another option for reducing the request load sent to the API. (Remember, if you go over your request limit, your integration will start returning errors.) To take advantage of webhooks, you'll need to have a HubSpot marketing professional or enterprise subscription. Then you can use webhook actions in the workflows. This makes your API integration more flexible.

As you can see, the limitations shouldn't be much of an issue. As long as you take efficiency into account during API development, you should be able to work within request rate limits. And after all, an efficient development strategy is a good priority to keep in mind whether your integration is subject to HubSpot limitations or not.





What can the HubSpot API do?

HubSpot is divided into several different APIs with distinct purposes. This section breaks down the different types of HubSpot API and what you can do with each:

- **Contact API.** Contacts are an essential part of utilising the HubSpot marketing automation platform. They store data that is specific to each lead and make it possible for you to do things like marketing automation and lead scoring, as well as creating the kind of content that assists in quality marketing, such as dynamic content (or smart content) that changes based on a visitor's past behavior with your site.
- **Companies API.** Similar to the Contacts API, the Companies API deals with an important component to organising your marketing automation efforts. It manages the company data that contacts can be sorted into. The reason you need a separate API for companies is because multiple contacts, tickets, or deals often need to be sorted into the same company. But each of those data pieces typically only has one company associated with it.

- **Deals API.** HubSpot has released the Deals API to improve integration with CRM objects. CRMs are one of the most common types of applications to be integrated with HubSpot. This API makes it easier to relate to various objects in HubSpot.
- **Tickets API.** A ticket is a customer request for support or some kind of assistance, as well as the responses generated in reply to the customer request. HubSpot CRM supports ticket objects.
- **Live Chat API.** The Conversations JavaScript API allows you to put a live chat widget on your website. With the widget, you can have chat conversations directly on the site. The API allows you to have more control over the widget so you can customise the experience your site visitors have.
- **Analytics API.** This is the API that helps with reporting. With it, you can pull marketing performance data from HubSpot, which just happens to have quite a variety of reporting tools. The data returned by the API mimics the data seen in those reporting tools.
- **Workflows API.** Workflows are essential to marketing automation. They tell the campaigns which triggers lead to which actions. Most often, a workflow is created to allow a marketing automation to enroll a contact into that workflow based on a trigger in an outside application.
- **Forms API.** Forms are an essential part of the HubSpot marketing automation platform. They are the part of a website that captures lead information. They are, in most cases, the primary method of lead capture. Although HubSpot has native form tools, in some cases it's better to build forms natively on your website and then pass the data from those forms to HubSpot.
- **CRM Extensions API.** With this API, you can form an integration that creates a sidebar in the CRM, displaying information for the app you've connected to HubSpot. It's like your software is built into the HubSpot CRM. The CRM Extensions API can populate data for contacts, companies, or deals on a card on the sidebar.



What Next? (Getting help with HubSpot API development)

Whether you want to offer an integration for your clients or you're looking for a custom HubSpot integration for yourself, you can always **reach out to our team at BBDBoom** to take care of HubSpot integration for you.

We will configure your integration and set up everything, making sure that the data flows are correct and any customisations you want are implemented appropriately. Basically, we'll make sure the HubSpot integration with the other system works seamlessly and the two systems play nice with each other.

Yes, HubSpot can currently be connected with thousands of popular apps either through native or third-party connector integrations. But the application that you need to connect with isn't always an option.

For API development for custom integrations, we also offer ongoing support, helping you to monitor your data and watch for any errors. And we offer fixed pricing plans, so you don't have to worry about surprise expenses.



Click here to talk to us about API development and custom HubSpot integration today.

Email: grow@bbdboom.com | Call: 01202 800464