

How to Check If an Email Is Valid: Three Attributes to Examine

Posted on May 6, 2020



Research data indicates that the global email user base steadily increases by 2–3% every year, with the number set to reach 4.7 billion by 2026. Still, marketers are worried that their messages may not reach the right people, resulting in high bounce and low open rates, adversely affecting their marketing efforts. That makes answering email marketing questions more crucial than ever. Is this email valid? Are all the email addresses in my recipient lists valid? Will my messages reach their intended recipients? To know how to check if an email is valid, read on.

Why You Need to Check If an Email Address Is Valid

An email distribution list can be a powerful marketing tool for nearly any business. However, there is a need to make sure that the list contains valid email addresses or can actually receive messages. Otherwise, messages sent to invalid email addresses can bounce.

Internet service providers (ISPs) can see and use email validation data to determine your domain's deliverability rating. If your emails bounce too many times, they may classify your messages as spam or even block them altogether. This risk is ever more present, notably as providers like Google and Yahoo! have taken major steps to govern bulk email sending as of February 2024 in an effort to reduce spam.

Invalid email addresses on your distribution list may also have adverse effects on marketing results since campaigns do not reach their targets. That is where email address validation comes in. It increases the chance of sending emails to customers who really want to open and read them by helping you create a valid email address list.

Three Attributes to Check If an Email Is Valid

Email address validity can be determined by performing specific checks. If any of these email validity checks fail, an email won't reach its intended recipient. To marketers, that may mean a lost business opportunity and the increased likelihood of landing on someone's blocklist. We discussed these attributes in detail below.

1. Syntax check

Every email address needs to follow a format specified by the Internet Engineering Task Force (IETF). Any address that fails to do so is deemed invalid. Ideally, an email address should have the local address, typically the inbox owner's name (e.g., john_doe), and the email provider's domain name (e.g., gmail[.]com). These components should be separated by the @ sign (e.g., john_doe@gmail[.]com). Sending emails with misspellings and formatting errors can result in one of two things. They will either bounce or get directed to a catch-all inbox, a type of email address many companies use to ensure that none of the messages intended for a staff member are lost.

2. DNS Check

Even with correct syntax, an email address still won't be able to receive messages without a valid domain name. It is essential to check email validity by ensuring that the email domain exists and is currently active, especially if it is not a popular email provider like Gmail, Outlook, or Yahoo!

3. Simple Mail Transfer Protocol (SMTP) Check

For an email address to work, it must have access to a corresponding SMTP server that allows you to send and receive emails. Therefore, one of the ways to test if an email is valid is to make an SMTP connection attempt and emulate the email-sending request process. If this fails, it means the email address does not exist on the target SMTP server or it cannot receive messages temporarily.

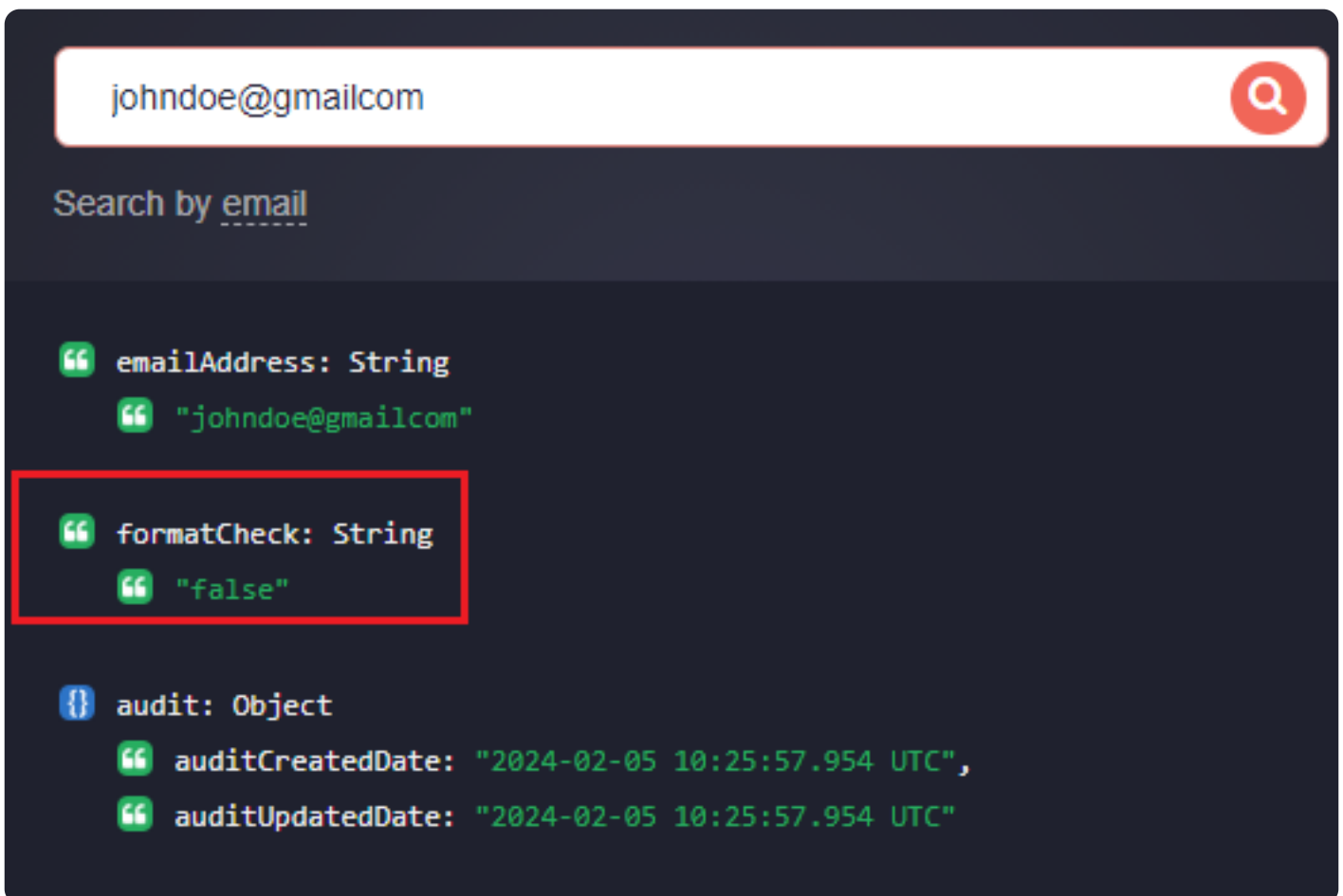
How to Check Email Address Validity

Way 1: Automated Email Validation

Email verification tools can be used to check email address validity automatically, allowing

marketing teams to save time and focus on other critical tasks. For instance, [Email Verification API](#) can instantly test if an email is valid by performing syntax, SMTP, DNS, and MX records checks. We put the tool in action below.


- **Syntax check:** It detected that johndoe@gmailcom doesn't follow the correct format since it doesn't have a top-level domain (TLD).



```
Search by email

{
  "emailAddress": String
    "johndoe@gmailcom"
  "formatCheck": String
    "false"
  "audit": Object
    "auditCreatedDate": "2024-02-05 10:25:57.954 UTC",
    "auditUpdatedDate": "2024-02-05 10:25:57.954 UTC"
}
```

- **SMTP check:** Also, johndoe@gmail[.]com failed the SMTP check, meaning the email address is invalid and, therefore, cannot receive messages.



Search by email



```
“ username: String
  “ "johndoe"

“ domain: String
  “ "gmail.com"

“ emailAddress: String
  “ "johndoe@gmail.com"

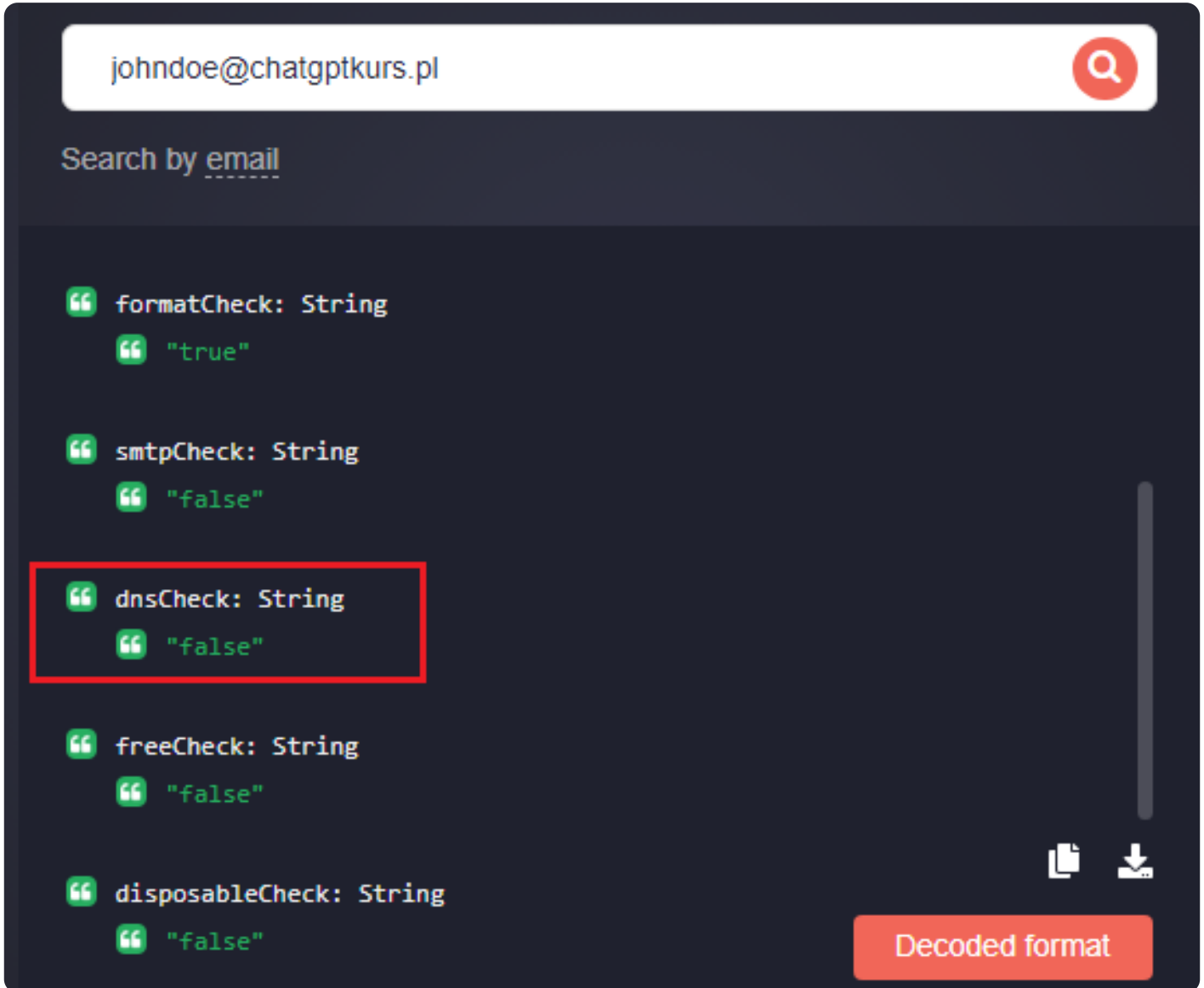
“ formatCheck: String
  “ "true"

“ smtpCheck: String
  “ "false"
```

Decoded format

- **DNS check:** Email Verification API detected that the email domain chatgptkurs[.]pl is an invalid domain name, rendering the email address invalid as well.



The screenshot shows a search interface for the email address `johndoe@chatgptkurs.pl`. The search results are displayed in a dark-themed code editor. The results are as follows:

```
formatCheck: String
  "true"

smtpCheck: String
  "false"

dnsCheck: String
  "false"

freeCheck: String
  "false"

disposableCheck: String
  "false"
```

The `dnsCheck: String` result is highlighted with a red box. At the bottom right of the interface, there is a red button labeled "Decoded format" and icons for copy and download.

Way 2: Check If an Email Address Is Valid Manually

Manual email verification can also be done, but it can be very tedious. For example, you would need to look for the email address owners' names and contact details via Google searches. However, you may not be able to verify each, as users who are more concerned about their privacy may not reveal their email addresses online. Or, if they do so, the publicly accessible addresses could be secondary or even temporary—email addresses they give out for subscription

purposes or even spam traps.

Another manual method is to actually send a message to the email address and turn on the email provider's read receipt feature. Of course, that is not a viable option if you care about your overall email domain reputation.

Other Checks You May Need to Perform


Aside from testing the validity of an email, it would also be beneficial to check if an email address is active or that the owner can actually open it. There are checks you can perform to learn if an email is temporary or a catch-all email, which is vital for compiling valid email address lists. We'll talk about these types of email addresses and how to detect them below.

Disposable Email Check


Disposable, temporary, or throwaway email addresses are used mainly by individuals who want to hide their identities and avoid giving out their personal email addresses. For marketers, that means sending marketing campaigns to these types of emails would be a waste of resources since the owners are not likely to open them.

Email Verification API instantly checks if an email address is disposable. It can weed out all temporary email addresses obtained from 10MinuteMail, Mailinator, GuerrillaMail, and other providers. To demonstrate, we got a temporary email address from 10Minute Mail. When we looked it up on Email Verification API, the tool detected that it was, indeed, disposable.





hsuhmmytmiwnjrto@cazfq.com

Inbox  0

0 8 5 0


10 Minute Mail

Free Temporary Email

Why would you use this?
Maybe you want to sign up for a site which requires that you provide an e-mail address to send validation e-mail to. And maybe you don't want to give up your real e-mail address and end up on a bunch of spam lists. This is nice and disposable. And it's free. Enjoy!

Protect your Privacy with our [Free](#)



hsuhmmyytmilwnjrto@caz1q.com 

Search by email



```
“ freeCheck: String
  “ "true"

“ disposableCheck: String
  “ "true"

“ catchAllCheck: String
  “ "false"

[] mxRecords: Array
  “ 0: "prd-smtp.10minutemail.com",

[] audit: Object
  “ auditCreatedDate: "2024-02-05 10:50:59.408 UTC",
```

Decoded format

When integrated into signup forms, Email Verification API can detect disposable email addresses that freemium abusers may use to register for trial periods repetitively (which doesn't bring in any revenue).

Catch-All Email Address Check

Catch-all email addresses accept emails meant for inactive or misspelled local addresses (i.e., employee or department emails). In other words, they are set up to collect emails sent to any address within a domain, regardless of whether that specific address actually exists on that domain. While using catch-all email addresses prevents businesses from missing out on opportunities, such addresses can cause email delivery issues for marketers.

Email verification tools can detect catch-all email addresses. An example is `help@google[.]com`, which Email Verification API detected as a catch-all email.



help@google.com

Search by email

```

  "catchAllCheck": String
    "true"

  mxRecords: Array
    0: "smtp.google.com",

  audit: Object
    auditCreatedDate: "2024-02-05 11:00:44.527 UTC",
    auditUpdatedDate: "2024-02-05 11:00:44.527 UTC"

```

Decoded format

To sum up, the three attributes that need to be checked to see if an email is valid are its syntax, DNS, and SMTP connection. In addition, checking for disposable and catch-all email addresses may also be included since these types of emails can affect email deliverability.

We demonstrated how Email Verification API can perform these checks, but you can also do bulk

email validation on up to 50,000 email addresses using [Bulk Email Verification API](#).

All that said, checking email address validity is critical. Organizations need to subject every email address coming their way to tests to ensure good deliverability and keep their email reputation intact.

If you want to see how Email Verification API can help with your email list, [sign up and test the API for free](#) or [contact us](#) if you have any questions.