

How to Check If an Email Address Exists Using DNS MX Records, SMTP Connections, and Email-Sending Emulation

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Nonexistent, invalid, or fake email addresses, which aren't connected to existing business domain names, can spell trouble for organizations when used as part of a site's registration process or in an online contact form.

Such addresses can be the product of human error. For example, users may inadvertently mistype their email addresses by omitting, adding, or switching one or more characters or words. However, using nonexistent email addresses can also be deliberate for different reasons that include:

- Abusing freemium services or features offered by a website by creating several fake accounts
- Getting access to premium content, like a gated white paper, without ending up on someone's email list
- Hiding while conducting fraud

Any of the above can hurt a company. These practices can result in higher operational costs, as users utilize system resources without paying for them. Invalid email address usage also results in lower conversion rates and tarnished email reputations due to hard bounces, which affect deliverability.

It is, therefore, important for IT specialists to ensure that emails from nonexistent addresses don't make their way into an organization's systems or employees' inboxes.

The first step is to check if an email address exists. That can be done by looking at Domain Name System (DNS) mail exchanger (MX) records and Simple Mail Transfer Protocol (SMTP) connections and by emulating email sending. These functionalities are all available in [Email Verification API](#).

How to Check If an Email Exists

The most basic way to check if an email exists is by actually sending a message to that address and waiting for a few minutes up to an hour to see if it bounces. If the email address doesn't exist, you'll receive an email similar to this:



Address not found

Your message wasn't delivered to [redacted] because the address couldn't be found, or is unable to receive mail.

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Another manual method to check if an email address exists is to go to the website of its service provider, type in the email address, and press Enter. If the email address exists, you will be prompted to enter a password. If it doesn't, you will see an error message.



Sign in

to continue to Gmail

Email or phone

emailverificationdemonstration|

! Couldn't find your Google Account

[Forgot email?](#)

Not your computer? Use Guest mode to sign in privately.

[Learn more](#)

[Create account](#)

Next

Of course, these are very tedious and potentially questionable approaches for validating the existence of an email address. And they certainly won't work if you want to verify addresses automatically.

How to Check an Email Address without Sending an Email

Email Verification API allows you to check if an email exists almost immediately without manually sending a message. Verification is even doable while a user is still in the process of signing up on your website.

To illustrate, we ran two types of fake email addresses on Email Verification API. One is nonexistent but uses a valid email domain (emailverificationdemonstration@gmail[.]com). The other uses a nonexistent domain (emailverificationdemonstration@pwemel[.]top).

In the first case, while the address's syntax is correct, the tool detected that it does not exist since it couldn't establish an SMTP connection when it performed email emulation. SMTP is the standard communication protocol used to send and receive emails, so checking for it is a foolproof way of verifying if an email address is valid.



emailverificationdemonstration@gmail.com verification details

[New lookup](#)

Check email by syntax

Valid

SMTP check

The email address doesn't exist on the target SMTP server or temporarily couldn't receive messages.

Domain name system check

The domain in the email address has passed DNS check.

Free email address check

The email address is free.

Check email provider for abuse

The email address isn't disposable.

Catch all emails address

The mail server doesn't have a "catch-all" address.

[Documentation](#)

The tool also checks if the domain exists. We ran the second email address with a nonexistent domain (emailverificationdemonstration@pweml[.]top), and the tool detected that, too.



Email Verification Lookup

emailverificationdemonstration@pwemel.top verification details

New lookup

Check email by syntax

Valid

Domain name system check

The domain in email address hasn't passed DNS check.

Free email address check

The email address is paid.

Check email provider for abuse

The email address isn't disposable.

You can sign up to our [Email Verification API](#) for free to test the tool.

Testing the Waters: Do Top Websites Check If an Email Address Exists?

Out of curiosity, we used the said email addresses on Amazon, Canva, Craigslist, Shopify, and Wix to see if we could successfully register an account with them.

Case #1: Amazon, Canva, and Craigslist



Amazon, Canva, and Craigslist sent verification links and codes to the fake email addresses. As the email addresses do not exist, we couldn't receive the codes and, therefore, weren't able to create an account.



Verify email address

To verify your email, we've sent a One Time Password (OTP) to [emailverificationdemonstration@gmail.com](#) ([Change](#))

Enter OTP

Create your Amazon account

By creating an account, you agree to Amazon's [Conditions of Use](#) and [Privacy Notice](#).

[Resend OTP](#)

< You're almost signed up

Enter the code we sent to [emailverificationdemonstration@gmail.com](#) to finish signing up.

Code

Continue

Didn't get the code? [Resend code](#)

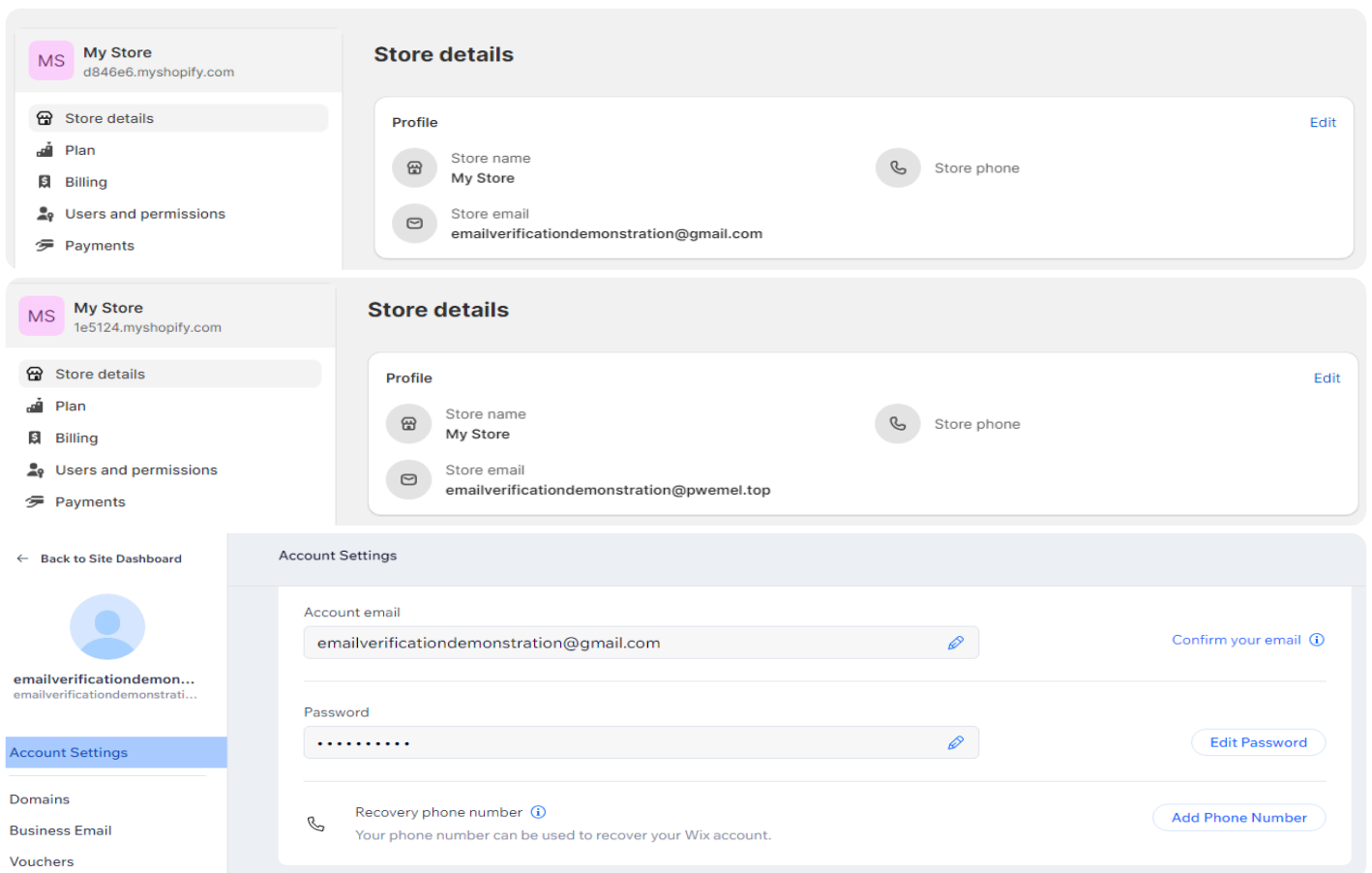
Thanks for signing up for a craigslist account!
A link to activate your account has been emailed to [emailverificationdemonstration@gmail.com](#).
Questions/comments? Please see our [help pages](#).

These websites implement a common type of email verification that requires users to take action. When they click the verification link or input the code sent to their inboxes, the customers verify their accounts.

However, in cases when users type the wrong email addresses, they would have to go back a few steps to correct it. Automating the email verification process by immediately informing customers that the email addresses they gave are invalid can help smoothen the signup process.

Case #2: Shopify and Wix

On the other hand, Shopify and Wix immediately proceeded to account creation for both fake email addresses.



The image displays three screenshots of e-commerce platform account creation interfaces. The top two screenshots show the 'Store details' section of a Shopify account, where the store name is 'My Store' and the email is 'emailverificationdemonstration@gmail.com'. The bottom screenshot shows the 'Account Settings' section of a Wix account, where the account email is 'emailverificationdemonstration@gmail.com' and the password is masked with dots. The Wix interface also includes a 'Recovery phone number' field and a 'Confirm your email' link.

Shopify Store Details (Top):

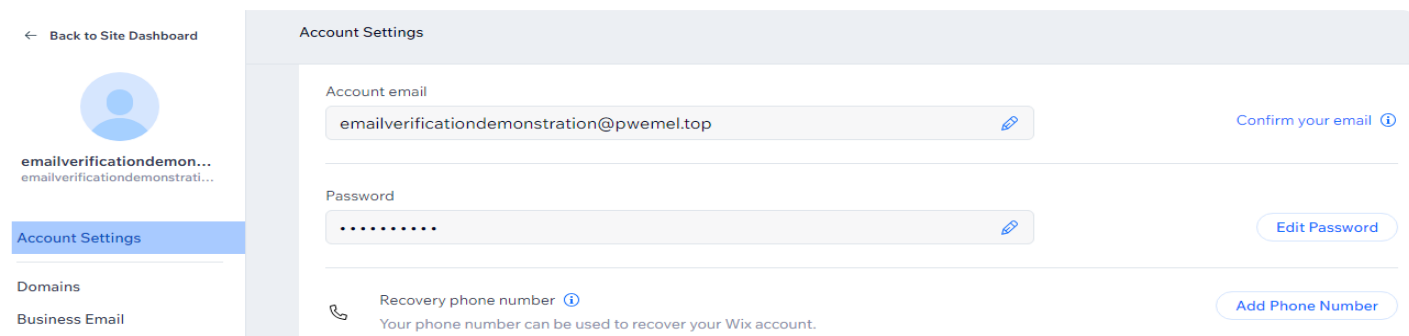
- Store name: My Store
- Store email: emailverificationdemonstration@gmail.com

Shopify Store Details (Middle):

- Store name: My Store
- Store email: emailverificationdemonstration@pwemel.top

Wix Account Settings (Bottom):

- Account email: emailverificationdemonstration@gmail.com
- Password: [Masked]
- Recovery phone number: [Field]
- Confirm your email: [Link]
- Edit Password: [Button]
- Add Phone Number: [Button]



Allowing the use of fake email addresses may have dire repercussions. If creating fake accounts is deliberate, the users may have suspicious motives in mind. For instance, they may use the accounts to set up shady websites that could serve as fronts for scams, counterfeiting, or fake news distribution.

However, if the customers only mistakenly typed their email addresses, they won't be able to receive billing, account, and marketing updates.

What Are the Benefits of Email Verification?

Integrating [Email Verification API](#) into a website helps detect fake email addresses so you can effectively prevent users from utilizing them. Coupled with other marketing strategies and security measures, the tool can help organizations:

- Achieve better email marketing results since users are encouraged to sign up with real email addresses
- Contribute to maintaining Internet safety since bad actors can't use nonexistent email addresses to create shady websites and accounts
- Increase revenue by effectively collecting payments and offering account upgrades since customers can receive billing and other account information
- Improve user experience by immediately alerting users if the email addresses they typed are invalid

Email address verification is essential to marketing, sales, and even cybersecurity. Filtering out nonexistent email addresses can help prevent issues that can pop up later on, which can be damaging to a website's reputation and an organization's overall security posture.

Do you have an email address in mind? Check if it exists and can receive email messages by using [Email Verification API](#) for free or [contact us](#) for more details.