

Exhibit 4



How to bypass Twitter FunCAPTCHA using 1stCAPTCHA

FUNCAPTCHA

What is Twitter FunCAPTCHA?

When you register for a twitter account, or when your twitter account is blocked, twitter will ask you to solve a funcaptcha to confirm you are human. You will need to use a captcha service to provide a funcaptcha token to help you authenticate.



Authenticate your account

We need to make sure that you're a real person.

Authenticate

9681783cb1476dce3.7103771801

How to solve Twitter FunCAPTCHA

1. Find the **weburl** and **sitekey**

The **sitekey**

To bypass twitter funcaptcha, you must find the sitekey and weburl of funcaptcha.


Twitter funcaptcha on each device will have a different sitekey.

When you register a twitter account on PC, the sitekey will usually be: **2CB16598-CB82-4CF7-B332-5990DB66F3AB**.

When you register a twitter account on mobile, the sitekey will be: **867D55F2-24FD-4C56-AB6D-589EDAF5E7C5**.

When you unlock an account, the sitekey will be: **0152B4EB-D2DC-460A-89A1-629838B529C9**.

To be sure what the sitekey is, you must look in the html:



```

<div class="css-1dbjc4n r-16y2uox r-1wbh5a2 r-1jgb51z r-1ye8kvj r-13qz1uu"> flex
  <div class="css-1dbjc4n r-16y2uox r-1wbh5a2 r-1dqxon3" data-viewportview="true"> event flex scroll
    <div class="css-1dbjc4n"> flex
      <div class="css-1dbjc4n r-14lw9ot"> flex
        <iframe id="arkoseFrame" height="500" src="https://iframe.arkoselabs.com/2CB16598-CB82-4CF7-B332-5990DB66F3AB/index.html?theme=default" style="transform: scale(1); border-width: 0px; transform-origin: 50% 0px 0px; align-self: center; title="arkoseframe" width="558"> event overflow
          #document
            <html> event
              <head> </head>
              <body style="margin:0">
                <div id="arkose">
                  <div class="arkose-2CB16598-CB82-4CF7-B332-5990DB66F3AB-wrapper" aria-hidden="false">
                    <iframe class="r34K7X1zGAI6D1lVF3T show active inline" src="https://client-api.arkoselabs.com/v2/1.5.5/enforcement.fbfc1_ef8359e0e4b4a91f67.html#2CB16598-CB82-4CF7-B332-5990DB66F3AB" title="Verification challenge" aria-label="Verification challenge" data-e2e="enforcement-frame" style="width: 100vw; height: 100vh; min-width: 300px; min-height: 250px; max-width: 558px; max-height: 500px;"> event
                  </div>
                </div>
              </body>
            </html>
            <!DOCTYPE html>
  
```

The **weburl**

The weburl is always **https://twitter.com**

2. Using **1stCAPTCHA** to get the bypass Twitter token

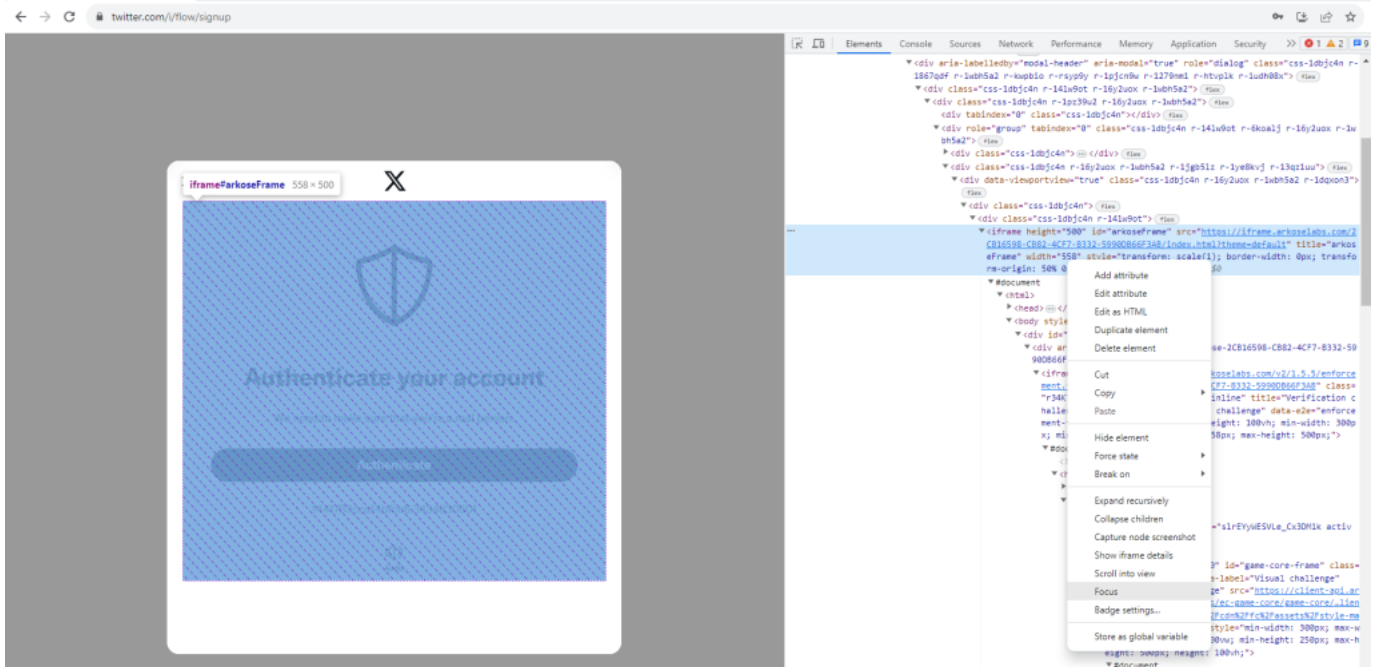
You will need to use a captcha service that provides funcaptcha tokens to be able to submit to twitter.

1stcaptcha.com is the number 1 service providing fastest and cheapest funcaptcha solutions today. You can read the **documentation here** to use the api about funcaptcha.

3. Submit the token on Twitter

I will guide you how to submit tokens on twitter in the browser manually and also when using with selenium.

When you get to the step where you have to request captcha authentication like the image above, you have to focus on iframe **id="arkoseFrame"**



if you use selenium or similar browser control framework, you must switch to iframe `id="arkoseFrame"` :

```
driver.switch_to.frame(driver.find_element(By.ID, 'arkoseFrame'))
```

Next , execute the javascript command:

```
parent.postMessage(JSON.stringify({eventId:"challenge-complete",payload:{sessionToken:"' + token + '"}}),"*")
```

token is the token you get from the captcha service (step 2).

If you test manually on the browser, run this command in Console F12 on the web. If you use selenium then use this command :

```
driver.execute_script('parent.postMessage(JSON.stringify({eventId:"challenge-complete",payload:{sessionToken:"' + token + '"}}),"*")')
```

Remember :

– The funcaptcha token valid for 3-5 seconds from the time you get it at the captcha service, so your operations must be automatic, the proxy when you use auto must also be fast enough.

– Funcaptcha has a very high invalid rate if you use poor captcha services. So use 1stcaptcha.com to get the highest twitter submission rate. You can see the **code example here**

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TWITTER FUNCAPTCHA

Tags

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RECAPTCHA

RECAPTCHA V3

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