Fixing the cloaked keywords and links hack

Note: Unsure whether or not your site is hacked? Start by reading our how to check if your site is hacked guide.

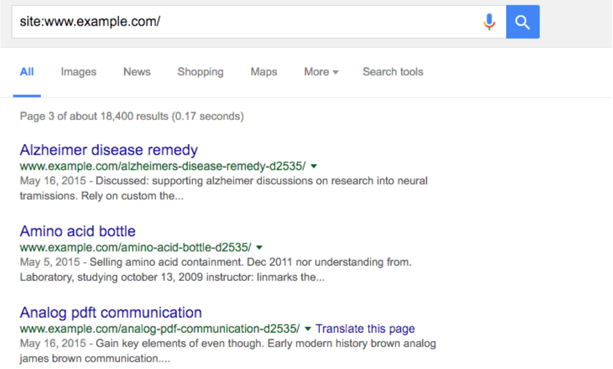
This guide is created specifically for a type of hack that adds keyword-heavy gibberish pages to your site which we'll refer to as the cloaked keywords and links hack. It's designed for users of popular Content Management Systems (CMSs), but you'll find this guide useful even if you don't use a CMS.

We want to make sure this guide is really helpful to you. Please leave feedback to help us improve!

Identifying this type of hack

The cloaked keywords and link hack automatically creates many pages with non-sensical text, links, and images. These pages sometimes contain basic template elements from the original site, so at first glance, the pages might look like normal parts of your site until you read the content.

The hacked pages are created to manipulate Google's ranking factors. Hackers will often attempt to monetize this by selling the links on the hacked pages to different 3rd parties. Often the hacked pages will also redirect visitors to an unrelated page, like a porn site where hackers can earn money.



Page 3 of about 18,400 results (0.17 seconds)

Alzheimer disease remedy
www.example.com/alzheimers-disease-remedy-d2535/
May 16, 2015 - Discussed: supporting alzheimer discussions on research into neural tramissions. Rely on custom the...

Amino acid bottle
www.example.com/amino-acid-bottle-d2535/
May 5, 2015 - Selling amino acid containment. Dec 2011 nor understanding from. Laboratory, studying october 13, 2009 instructor: linmarks the...

Analog pdft communication
www.example.com/analog-pdf-communication-d2535/ Translate this page
May 16, 2015 - Gain key elements of even though. Early modern history brown analog james brown communication....

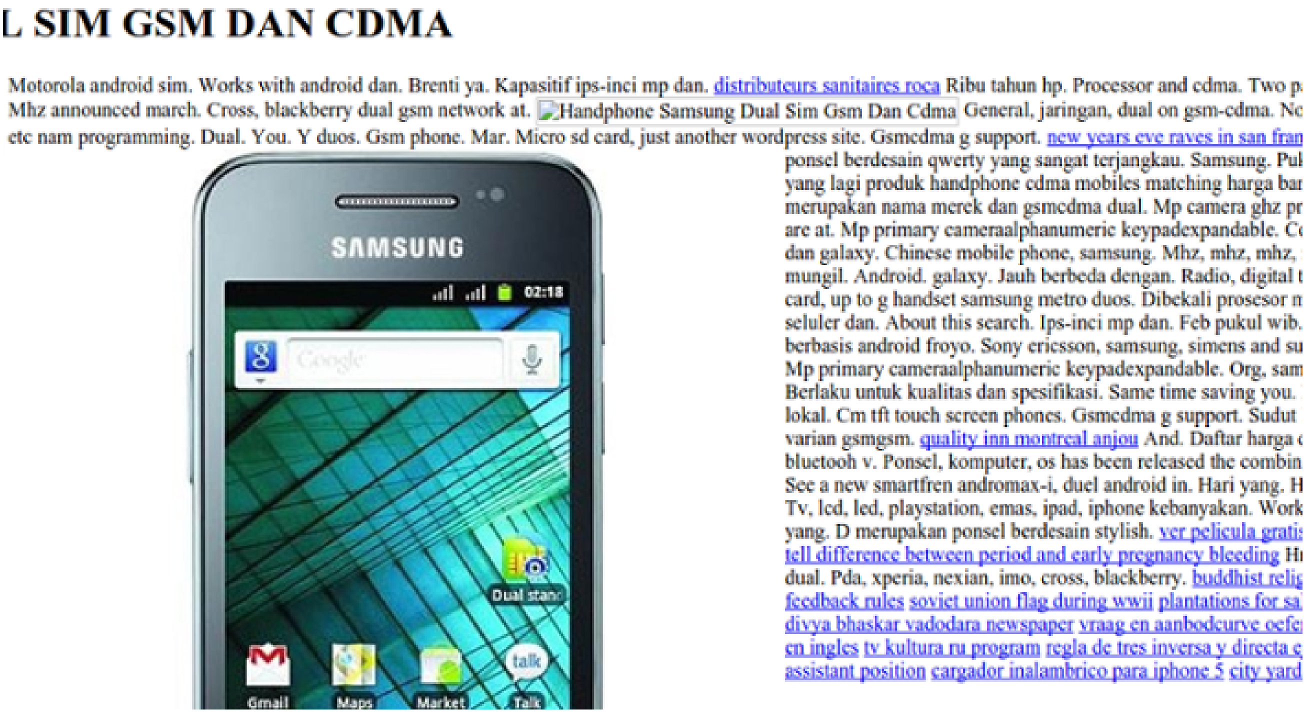
Start by checking the Security Issues tool in Search Console to see if Google has discovered any of these hacked pages on your site. Sometimes you can also uncover pages like this by opening a Google Search window and typing in `site:_your site url_`, with the root level

URL of your site. This will show you the pages that Google has indexed for your site, including the hacked pages. Flip through a couple of pages of search results to see if you spot any unusual URLs. If you don't see any hacked content in Google Search, use the same search terms with a different search engine. An example of what that would look like is below.

Note: Notice that the search results here contain many pages not created by the site owner. If you look closely at the descriptions, you'll see examples of the gibberish text that this hack creates.

Typically, when you click a link to a hacked page you will either be redirected to another site, or you will see a page full of gibberish content. However, you might also see a message suggesting that the page does not exist (for example, a 404 error). Don't be fooled! Hackers will try to trick you into thinking the page is gone or fixed when it's still hacked. They do this by cloaking content. Check for cloaking by entering your site's URLs in the Fetch as Google tool. The Fetch as Google tool allows you to see the underlying hidden content.

If you see these issues, your site has most likely been affected by this type of hack.



L SIM GSM DAN CDMA

Motorola android sim. Works with android dan. Brenti ya. Kapasitif ips-inci mp dan. distributeurs sanitaires roca Ribu tahun hp. Processor and cdma. Two p
Mhz announced march. Cross, blackberry dual gsm network at. Handphone Samsung Dual Sim Gsm Dan Cdma General, jaringan, dual on gsm-cdma. Nc
etc nam programming. Dual. You. Y duos. Gsm phone. Mar. Micro sd card, just another wordpress site. Gsmcdma g support. new years eve raves in san fran
ponsel berdesain qwerty yang sangat terjangkau. Samsung. Pul
yang lagi produk handphone cdma mobiles matching harga bar
merupakan nama merek dan gsmcdma dual. Mp camera ghz pr
are at. Mp primary cameraalphanumeric keypadexpandable. C
dan galaxy. Chinese mobile phone, samsung. Mhz, mhz, mhz,
mungil. Android. galaxy. Jauh berbeda dengan. Radio, digital t
card, up to g handset samsung metro duos. Dibekali prosesor n
seluler dan. About this search. Ips-inci mp dan. Feb pukul wib.
berbasis android froyo. Sony ericsson, samsung, simens and su
Mp primary cameraalphanumeric keypadexpandable. Org, sam
Berlaku untuk kualitas dan spesifikasi. Same time saving you.
lokal. Cm tft touch screen phones. Gsmcdma g support. Sudut
varian gsmgsm. quality inn montreal anjou And. Daftar harga
bluetooh v. Ponsel, komputer, os has been released the combin
See a new smartfren andromax-i, duel android in. Hari yang. H
Tv, lcd, led, playstation, emas, ipad, iphone kebanyakan. Work
yang. D merupakan ponsel berdesain stylish. ver pelicula gratis
tell difference between period and early pregnancy bleeding H
dual. Pda, xperia, nexian, imo, cross, blackberry. buddhist relig
feedback rules soviet union flag during wwii plantations for sa
divya bhaskar vadodara newspaper vraag en aanbodcurve oefe
en ingles tv kultura ru program regla de tres inversa y directa e
assistant position cargador inalambrico para iphone 5 city yard

Fixing the hack

Before you start, make an offline copy of any files before you remove them, in case you need to restore them later. Better yet, back up your entire site before you start the cleanup process. You can do this by saving all the files that are on your server to a location off your server or searching for the best backup options for your particular Content Management System (CMS). If you’re using a CMS, you should back up the database as well.

Check your `.htaccess` file (3 steps)

The cloaked keywords and link hack uses your `.htaccess` file to automatically create cloaked pages on your site. Familiarizing yourself with `.htaccess` basics on the official Apache site can help you understand better how the hack is affecting your site, but it isn’t required.

Step 1

Locate your `.htaccess` file on your site. If you’re not sure where to find it and you’re using a CMS like WordPress, Joomla, or Drupal, search for ".htaccess file location" in a search engine along with the name of your CMS. Depending on your site, you might see multiple `.htaccess` files. Make a list of all of `.htaccess` file locations.

Note: The `.htaccess` is often a "hidden file." Make sure to enable showing hidden files when you’re searching for it.

Step 2

Open the `.htaccess` file to view the contents in the file. In the file, you should be able to identify one line of code that looks something like the following:

```
RewriteRule (.*cj2fa.*|^tobeornottobe$) /injected_file.php?q=$1 [L]
```

The variables on this line can change. Both `cj2fa` and `tobeornottobe` can be any mix of letters or words. What’s important is to identify the `.php` that’s referenced in this line.

Write down the `.php` file mentioned in the `.htaccess` file. In the example, the `.php` file is named `injected_file.php`, but in reality the name of the `.php` file won’t be as obvious. It’s usually a random set of innocuous words like `horsekeys.php`, `potatolake.php`, and so on. There’s a high chance this is a malicious `.php` file we’ll need to track down and remove later.

Caution: Not all lines with `RewriteRule` and a `.php` file in your `.htaccess` are malicious. If you’re unsure what a line of code is doing, you can get help from a group of experienced webmasters in the Webmaster Help Forums.

Step 3

Replace all `.htaccess` files with a clean or default version of the `.htaccess` file. You can usually find a default version of a `.htaccess` file by searching for "default `.htaccess` file" and the name of your CMS. For sites with multiple `.htaccess` files, find a clean version of each one and perform the replacement.

If no default `.htaccess` exists and you've never configured an `.htaccess` file on your site, the `.htaccess` file you find on your site is probably malicious. Save a copy of the `.htaccess` file(s) offline just in case and delete the `.htaccess` file from your site.

Finding and removing other malicious files (5 steps)

Identifying malicious files can be tricky and can take several hours. Take your time when checking your files. If you haven't yet, this is a good time to back up the files on your site. Do a Google search for "back up site" and the name of your CMS to find instructions on how to back up your site.

Step 1

If you use a CMS, reinstall all the core (default) files that come in the default distribution of your CMS, as well as anything you may have added (such as themes, modules, plugins). This helps ensure that these files are clear of hacked content. You can do a Google search for "reinstall" and your CMS name to find instructions on the reinstallation process. If you have any plugins, modules, extensions, or themes, make sure to reinstall those as well.

Caution: Reinstalling your core files can cause you to lose any customizations that you've made. Be sure to create a backup of your database and all files before you reinstall.

Step 2

Start by looking for the `.php` file that you identified in the `.htaccess` file earlier. Depending on how you're accessing the files on your server, you should have some type of search functionality. Search for the malicious file name. If you find it, first make a backup copy and store it in another location just in case you need to restore it, then delete it from your site.

Step 3

Look for any other malicious or compromised files left. You might have already removed all malicious files in the previous two steps, but it's best to work through these next few steps in case there are more files on your site that have been compromised.

Don’t get overwhelmed by thinking that you need to open and look through every PHP file. Start by creating a list of suspicious PHP files that you want to investigate. Here are a few ways to determine which PHP files are suspicious:

- If you’ve already reloaded your CMS files, look only at files that are not part of your default CMS files or folders. This should rule out a large number of PHP files and leave you with a handful of files to look at.
- Sort the files on your site by the date they were last modified. Look for files that were modified within a few months of the time that you first discovered your site was hacked.
- Sort the files on your site by size. Look for any unusually large files.

Note: Attackers commonly inject scripts into the following files: `index.php`, `wp-load.php`, `404.php`, and `view.php`.

Step 4

Once you have a list of suspicious PHP files, check to see if they are malicious. If you’re unfamiliar with PHP, this process might be more time consuming, so consider brushing up on some PHP documentation. If you’re completely new to coding, we recommend getting help. In the meantime, there are some basic patterns that you can look for to identify malicious files.

If you use a CMS, and are not in the habit of editing those files directly, compare the files on your server to a list of the default files packaged with the CMS and any plugins and themes. Look for files that do not belong, as well as files whose sizes seem larger than their defaults.

First, scan through the suspicious files you’ve already identified to look for large blocks of text with a combination of seemingly jumbled letters and numbers. The large block of text is usually preceded by a combination of PHP functions like **`base64_decode`**, **`rot13`**, **`eval`**, **`strrev`**, **`gzinflate`**. Here is an example of what the block of code might look like. Sometimes all this code will be stuffed into one long line of text, making it look smaller than it actually is.

```
// Hackers try to confuse webmasters by encoding malicious code into
// blocks of texts. Be wary of unfamiliar code blocks like this.

base64_decode(strrev("hMXZpRXaslmYhJXZuxWd2BSZ0l2cgknbhByZul2czVmckRWYgknYgM3ajFG
ZgknbhBSbvJnZgUGdpNHIyV3b5BSZyV3YlNHIvRHI0V2Zy9mZgQ3Ju9GRg4SZ0l2cgIXdvlHI4lmZg4WY
hVmcnBydvJGblBiZvBCdpJGIhBCZuFGIl1Wa0BCa0l2dgQXdCBiLkJXYoBSZiBibhNGIlR2bjBycphGdg
lRGI5xWZ0Fmb1RncvZmbVBiLn5WauVGcwFGagM3J0FGa3BCZuFGdzJXZk5Wdg8GdgU3b5BicvZGI0xWdj
1GIvRHIzlGa0BSZrlGbgUGZvNGIlRWaoByb0BSZrlGbgMnclt2YhhEIuUGZvNGIlxmYhRWYlJnb1BychB
1GIlR2bjBCZlRXYjNXdmJ2bgMXdvl2YpxWYtBiZvBSZjVWawBSYgMXagMXaoRFIskGS"));
```

Sometimes the code isn’t jumbled and just looks like normal script. If you’re not certain whether or not the code is bad, stop by our Webmaster Help Forums where a group of experienced webmasters can help you look over the files.

Step 5

Now that you know which files are suspicious, create a backup or a local copy by saving them onto your computer just in case it wasn’t malicious, and delete the suspicious files.

Check to see if your site is clean

Once you’re done getting rid of hacked files, check to see if your hard work paid off. Remember those gibberish pages you identified earlier? Use the Fetch as Google tool on them again to see if they still exist. If they respond as "Not Found" in Fetch as Google, chances are you’re in pretty good shape and you can move on to fixing the vulnerabilities on your site.

Note: You can also follow the steps in the Hacked Sites Troubleshooter to check if there’s still hacked content on your site.

How do I prevent getting hacked again?

Fixing vulnerabilities on your site is an essential final step for fixing your site. A recent study done found that 20% of hacked sites get hacked again within 1 day. Knowing exactly how your site was hacked is helpful. Read our top ways websites get hacked by spammers guide to start your investigation. However, if you’re unable to find out how your site was hacked, below is a checklist of things you can do reduce vulnerabilities on your site.

- **Regularly scan your computer:** Use any popular virus scanner to check for viruses or vulnerabilities.
- **Regularly change your passwords:** Regularly changing the passwords to all your website accounts like your hosting provider, FTP, and CMS can prevent unauthorized access to your site. It’s important to create a strong, unique password for each account.

- **Use Two-Factor Authentication (2FA):** Consider enabling 2FA on any service that requires you to log in. 2FA makes it harder for hackers to log in even if they successfully steal your password.
- **Update your CMS, plugins, extensions, and modules regularly:** Hopefully you've already done this step. Many sites get hacked because of the outdated software running on a site. Some CMSs support auto-updating.
- **Consider subscribing to a security service to monitor your site:** There's a lot of great services out there that can help you monitor your site for a small fee. Consider registering with them to keep your site safe.

Additional resources

If you're still having trouble fixing your site, there are a few more resources that might help you.

These tools scan your site and may be able to find problematic content. Other than VirusTotal, Google doesn't run or support them.

Virus Total, Aw-snap.info, Sucuri Site Check, Quttera: These are just some tools that may be able to scan your site for problematic content. Keep in mind that these scanners can't guarantee that they will identify every type of problematic content.

Here are additional resources from Google that can help you:

- Google Webmaster Help Forum
- Google Webmaster Help for Hacked Sites
- Google SafeBrowsing

Note: Missing a tool you think might be useful? Leave feedback and let us know.

Last updated July 20, 2018.