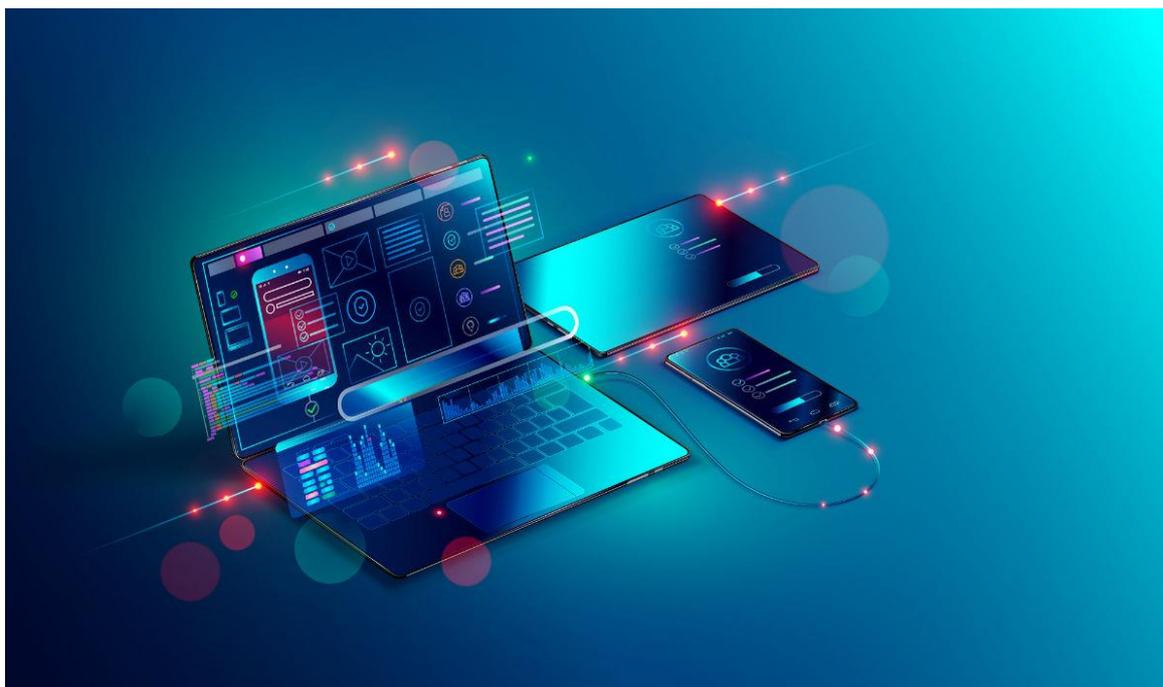


Internet site visibility testing on the Chinese internet

“Internet site visibility testing on the Chinese internet free testing tools”

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Chinese internet site testing tools

Release 2 (2.10)

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Testing your internet site in China is often seen as complex. It is not. The goal of this paper is to help you understand the facts and processes so you can make an informed business plan if the Chinese internet market is appropriate for your business.

If you need any further help on the points raised, find an error, or points not covered please contact: support@accesstochina.com.

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Version 2.8 Updates

Subject	Report	Website
Introduction (Home Page)	X	X
Overview (Home Page)	X	X
How does browsers work over the internet? (learn more)	X	X
Reviewing your web page test results (learn more)	X	X
Chinese internet corrective actions (learn more)	X	X
Access to China support (About us)	X	X
Web page testing links (Website titles and description)	X	X

Version 2.9 & 2.10 Updates

Subject	Report	Website
General change in term "content" to "internet site"	X	X

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Can your business internet site be seen on the Chinese internet?

Chinese businesses often state that they want to trade with international business. The problem is locating potential trading partners. Their starting point, like the rest the world, is a search on the internet. This is hampered from the outset as international internet site; website, social media, video platforms, etc, often cannot be seen or not listed in the in the Chinese search engines correctly.

Access to China internet site page testing tool enables your business to see the performance of your internet site from inside China.

Why use our internet site testing tools?



Most internet site test tools only test to see if your business domain can be seen from mainland China in the form of a simple “ping test”. A “ping test” is like poking your internet site to see if it exists.

All a “ping test” determines is whether your internet site IP address is not blocked in China. It does not start to explain your internet site performance in China or if parts of your internet site content are blocked.

This testing process helps you understand which parts of your business can be seen over the internet and the response times. The reality is that most international sites take over 30 seconds to load and due to international social media & Google site content being blocked or slowed down which leaves your internet site with missing components or not working at all.

This testing tool report shows you how each of part of internet site content is performing. Your internet site performance is measured in how the end user can see of your business.

This testing process was created from open source software developed original by ALO and enhanced by Google.

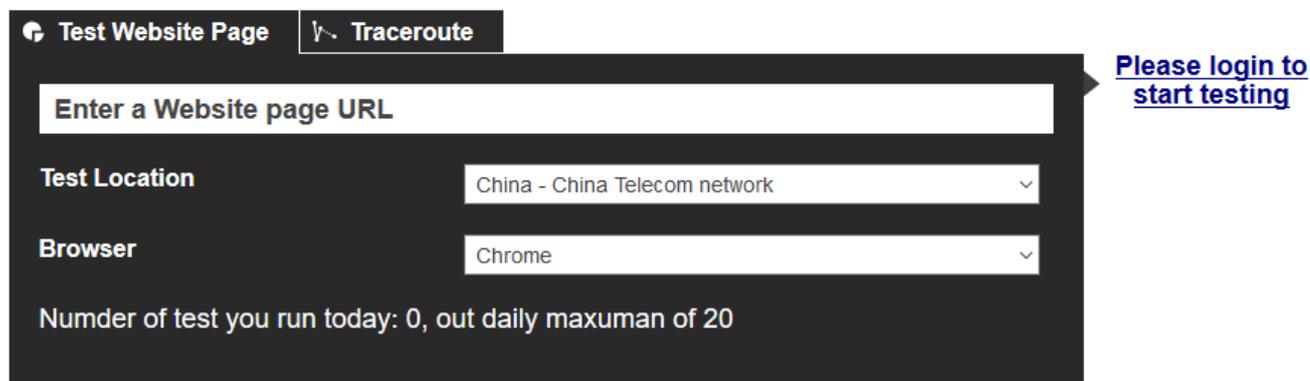
In keeping with open source principles and Access to China policy to share information, the use of this testing tool and supporting information to help correct issues is free to use.



In you need help reviewing and correcting your internet site visibility on the Chinese please do not hesitate to get in contact. support@accesstochina.com

Start testing here; <https://webtest.accesstochina.com/>

Test your internet site



<https://webtest.accesstochina.com/>

You can run up to 20 tests per day without any charge. This is limited to prevent robotic testing.

If you wish to run more than 20 tests in a day please contact support@accesstochina.com

Login / Register

To enable us to send your test results we need your email address.

Your email address is only used by Access to China. If you wish us to remove your details from our database please email us at support@accesstochina.com.

We do use cookies only for delivering our services Any information collected using cookies it is not kept or used by Access to China.

If you need any further help on the points raised, found an error, or points not covered please contact support@accesstochina.com.

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No part of this website may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording or by any information storage and retrieval system, without written permission from the author.

By logging into to our test system we understand that you accept these points above.

The testing processes



Start your testing

Test Website Page
Traceroute

Test Location

China - China Unicom network

Browser

Chrome

Number of test you run today: 0, out daily maxuman of 20

START TEST

Enter the URL for the page you wish to test:

this can be www, just the domain name, IP address or http / https. Any format that you currently use to access your web page.

Select the test location:

if you have not tested your web page before we recommend that you baseline the web page on location outside Asia. Any problem shown in the Asia region can be identified as an existing problem or new problem introduced when accessing the web page from China / Asia.

You will see that we offer testing from UK. If you wish to use a different location in the world for 'baseline' testing; please see <https://www.webpagetest.org>

Select browser:

In China Chrome is the most widely used.

Press start:

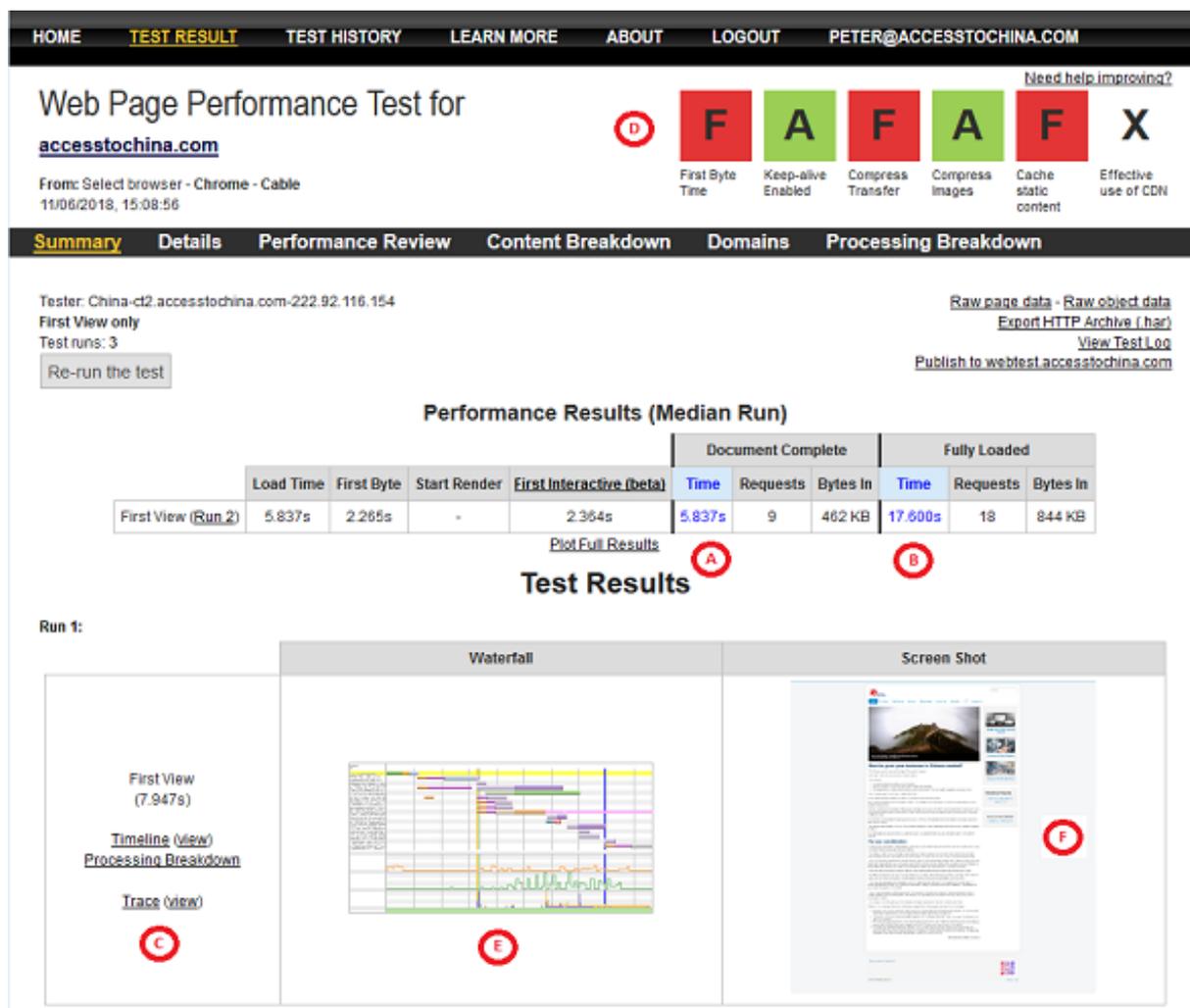
Test runs takes up to 10 minutes. Once the test will complete and you return to the results in the "Test History".

If you want to run more than one test, go back to the home page and start another once your original test has begun. The first test first will remain in the queue and will be processed as and when resources are available.

There is more than one test agent running on each network in China, so the wait should not be too long.

Review test results

Once internet site page has been tested three times, you will see results like this:



(a) The average time over three tests it has taken to show first response in the user browser.

(b) The average time over three tests it has taken to load the full website page.

(c) The time it has taken to load the full internet site page content for each of the three tests.

(d) For tests where you have selected Chrome or Opera browser the website response time components are graded.

(e) Waterfall chart showing all the components of your website page and their individual response time. If you are new to internet Waterfall reports please see webtest.accesstochina.com/learnmore.php

(f) An image of the website page as seen from the test location.

Make corrections

Make changes to your website when response times are slow and/or missing. For ideas on changes that maybe required please see: <https://webtest.accesstochina.com/learnmore.php>

Re-run test

Retest website pages as required and confirm any changes have been successful.

We do recommend rerunning the test after each change you make to your internet site to make sure that the change has worked in the Asia region and not to your exiting services.

- In China; to make sure the change was successfully.
- Baseline; to make sure you have not changed your exiting web page look and feel or functionality.

How does browsers work over the internet?

To understand what is happening when you access your internet site from a remote location, a basic knowledge of how your browser works may be helpful.

Most browsers and APP's work in the same way.

- 1) Enter a URL into the browser;

This informs the browser where your internet site is located; e.g. Domain name, IP address, etc.

- 2) DNS lookup; Internet request to lookup domain name IP address location;

The request from the mobile, tablet, PC, etc. is passed to local ISP to lookup the IP address for the domain. When a browser requests the Domain IP address it asks the local network DNS server. If you are in New York it will look up the domain name locally.

Once the internet has found the IP address, the information is returned and recorded on your device. The browser then sends the URL to the IP address. If the request to the IP address is not specific information then the default data file is returned. This is normally known as the "index file".

As few issues can happen at this stage;

- The domain name lookup cannot find the domain name on the local DNS. In this event the local DNS requests the information from a national DNS until the IP address is found or not. This can take time.

Often in China and Asia when the local DNS cannot find the international IP address, a local IP address is returned and a different internet site is shown. This can be very misleading for the end user.

This normally only happens to domain names which are not often used in a region.

- The domain IP address stored on your device is only resent even few hours. Often, therefore you may need to refresh your browser / clear browser history to remove an incorrect IP address.
- If you use an IP address in the browser this will give faster access to the internet site. This works well provided there are not more than one domain name associated with IP address. In this case the default internet site will be returned. This may not be the information you looking for.

- 3) The browser upon receiving the index file;

On receiving the "index file" the browser performs the instructions within it.

4) Browser requests more data from your server;

Chinese internet rules can block some international internet site or slowdown so the access speed of the information becomes unusable.

When the index file is executed by the browser it will normally request other files e.g. Images, page layout information (CSS files). Each time the Browser makes a request to download files from the domain / IP address.

Inside some of these files there may be more requests to download additional files. This can make the process longer.

Each browser is limited to the number of concurrent download files it can request at one time. i.e.

Version	Maximum connections
Internet Explorer® 7.0	2
Internet Explorer 8.0 and 9.0	6
Internet Explorer 10.0	8
Internet Explorer 11.0	13
Firefox®	6
Chrome™	6
Safari®	6
Opera®	6
iOS®	6
Android™	6

The issues here are the number and size of each file, e.g. if you have 60 files in internet site page it will take longer to download than a page of data with 10 files.

5) Browser requests data from other locations on the internet

Today, to speed up the development of internet site, we often use third-party services for our internet site content. Simple example is YouTube.

While this is not normally a problem, if the third-party service is blocked in China then the internet site content will be missing on your internet page.

If you are using a third-party routine e.g. Google security reCAPTCHA, which is blocked in China then your whole page of data may become unusable.

There are solutions to the above examples.; load the data direct from your internet site server and use a local security reCAPTCHA module within your internet site page.

6) Browser history

The browser can hold information about the web page and if you have visited the page before. In the browser will be looking at two elements about file and browser settings;

- How much time has passed since the browser last downloaded the information from a file. In the browser history settings there is a default time. The browser will use the local copy of the file before it tries to download it again.
- Before a file is downloaded again the details on the local file is compared to the server file details, e.g. timestamp. If they are the same then the browser does not download the file again.

In both these saturations it helps speed up response time.

Browser history can be misleading, first impressions are important and browser history will not help your response time if it is the first time the internet site content page is been review.

7) Proxy servers

Proxy servers can be implemented in the three different ways

- Proxy server on the frontend of web page server so speeding up the reading of the data from your server to the internet.
- Local in an office. This works in the same way as the browser history except sharing the history with anyone looking at the web page in the office.
- A regional proxy server. This is where you can create a proxy server in a region of the world and point the traffic looking for your web pages to this server. As the regional server contains the fixed data files of your web page this will greatly speed up the time takes the data files.

Please note:

- this testing process records the browser history or local proxy server and therefore the results will be as if looking at web page for the first time.
- if you are using a proxy server on the frontend of your webpage or a regional proxy server the test results will reflect this.

8) The browser creation of your page of data.

As the browser starts receiving data from the internet it starts creating your information page.

Normally this processes is completed within a few seconds.

If you access your internet site remotely for Asia / China this process can take a lot longer. In this case, the screen of data will keep changing as you try to review it / press buttons.

At best this looks confusing and often is seen as a poor web page. The web page could be good and created in advance internet look and feel techniques. The general rule is, the more complex your web pages the more local processing (Mobile / table / pc) and internet resources is required to display the information.

When accessing your internet site from the other side of the world having a complex web page with a very slow load time will not be reviewed or have a high search engine listing in China.

Example, BBC.COM (June 2018) has over 60 files required to be loaded to use the home page. The home takes over a minute to load. You cannot select a button until the whole screen is loaded. China does not need to block the BBC website / APP given is poor performance in China.

If you wish to market / trade with China you must make sure your internet site can be seen successfully in China.

I would always use the time it takes to load your full web page as the measure of your performance. Not the time it takes for the start loading the web page.

The EU GDPR compliant (Cookie acceptance)

There is now a ruling for the EU countries that they must ask the internet user if they accept of your business tracking usage of the internet site data.

This is leading to confusion when reviewing your website in China / Asia;

- Often the “accept” change button is poorly coded so it locks your data until all the data has been fully load by the browser. The internet user may be waiting minutes for this to complete.
- The Cookie acceptance is not understood by someone who cannot read your language. If they are using the browser translate option, it often does not work on pop up messages.
- Poor technical coding of the “cookie acceptance message” often leaves the web page usable.
- Chinese search engine will see your web pages as poor performance and you will get poor search engine ranking.
- Google Analytics performs very poorly in China and slows down your webs page performance dramatically.

Our recommendation is to remove all tracking cookies from your web pages so that the EU GDPR compliant acceptance message is no longer required. You will lose some marketing data but more importantly your web pages can be read.

Use our web page test tool to monitor what the internet user can see from China / Asia regions.

Reviewing your internet page test results

The web test page results are run three times. Each time the local browser history is cleared down. In doing so it creates the following reports:

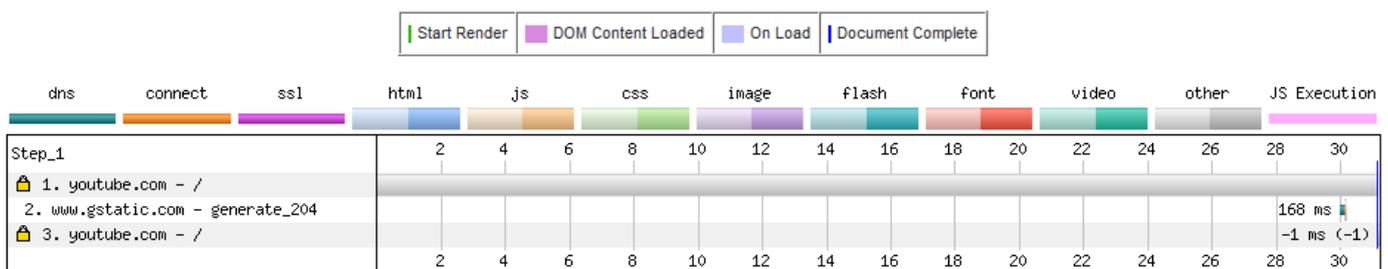
Waterfall View report

You may see the following issue from the outset;

- On the first test you may see that your web page has not been found. This often happens in China if the domain name has not been used in China recently. It does find the domain name on its first attempt,
- If all three tests show nothing found then the web page is blocked or your URL was wrongly entered.

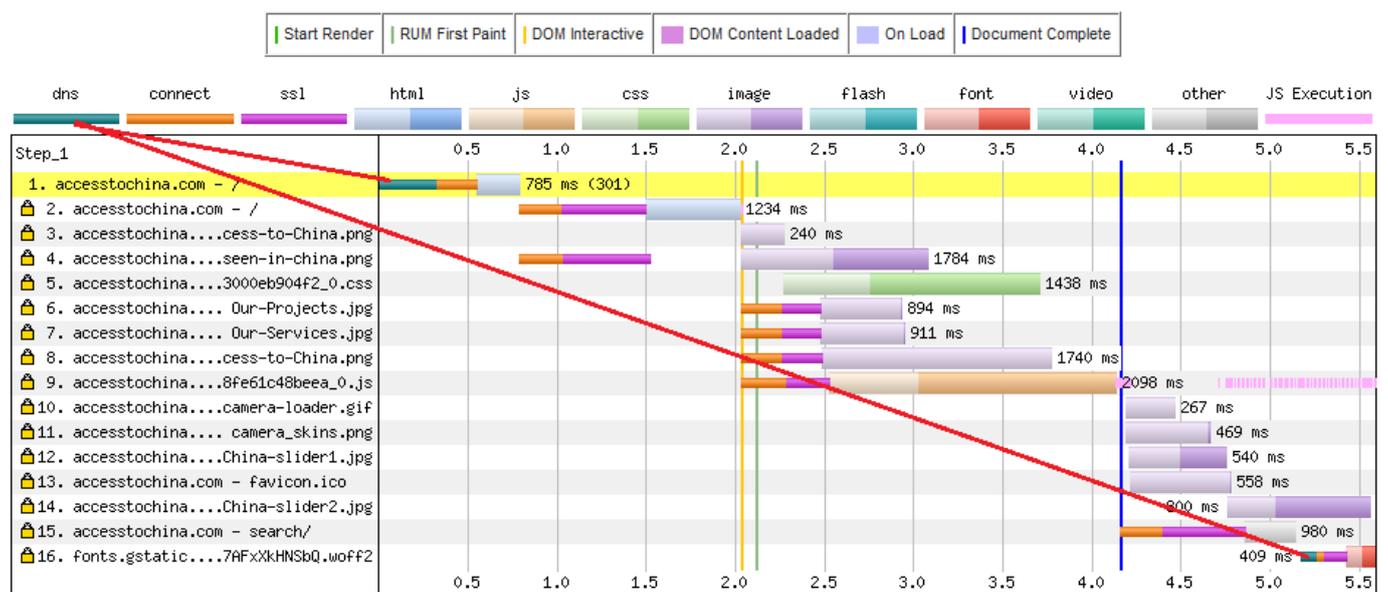
This is an example of a blocked internet site content: youtube.com

Waterfall View



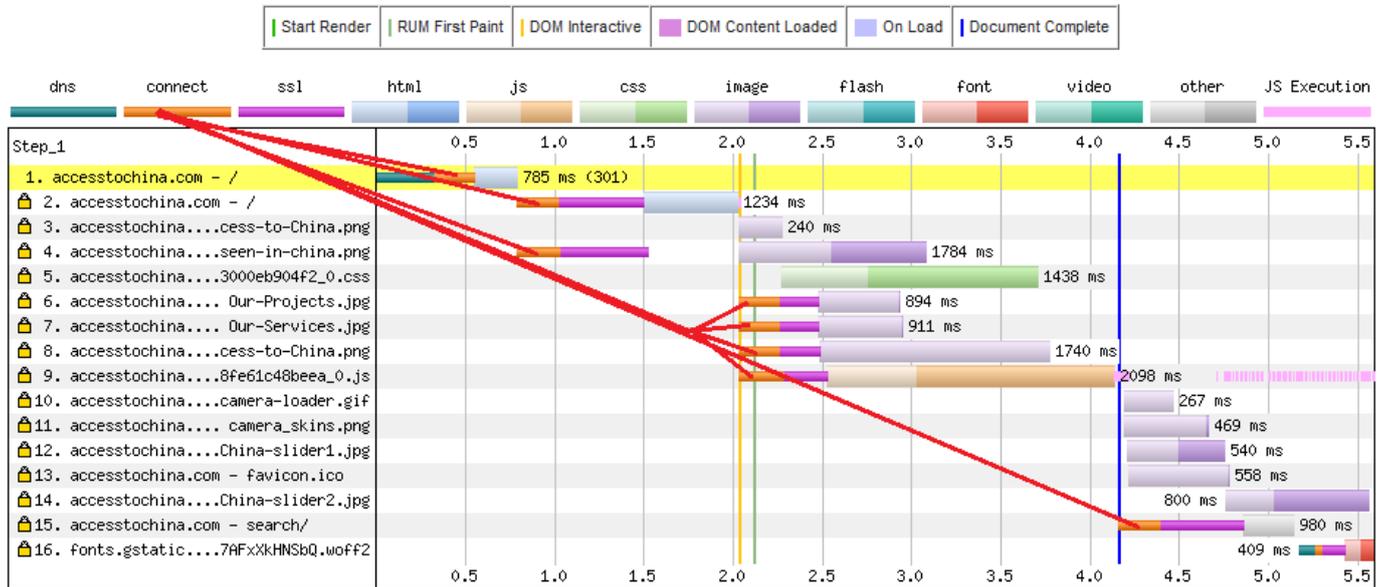
The DNS lookup is performed for each domain used in your website. This example is our web page, accesstochina.com, showing the DNS load time (green line).

Waterfall View



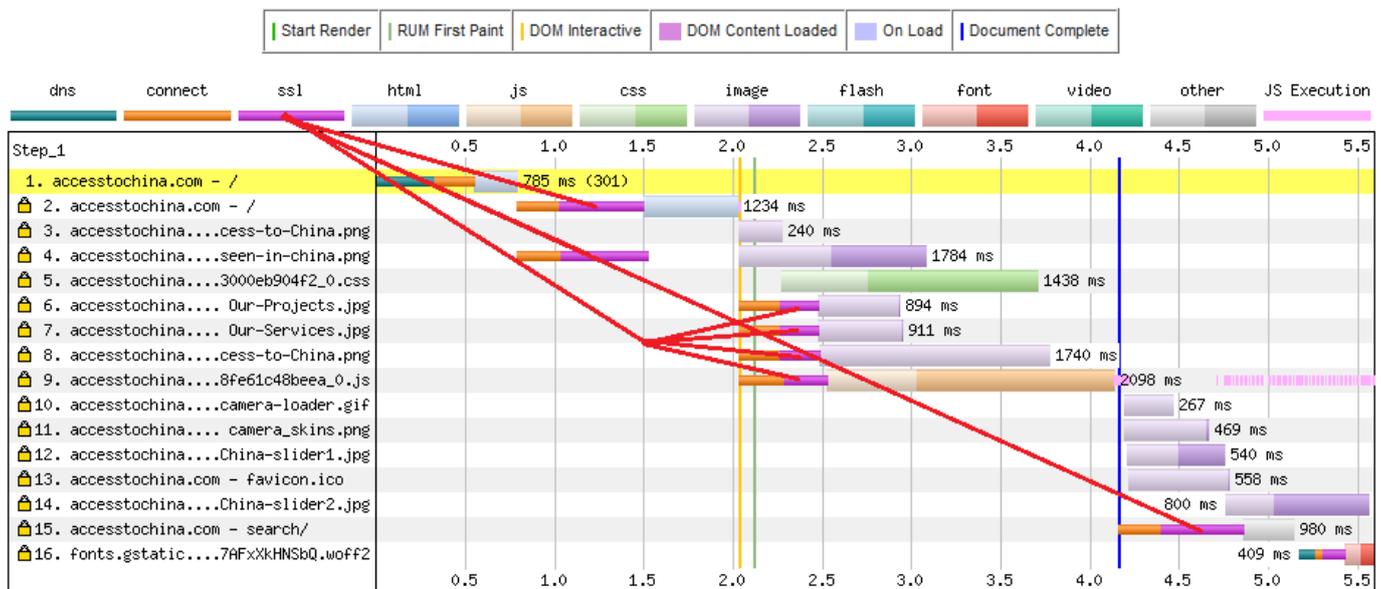
The connection time from the browser to the service is shown in orange;

Waterfall View



If you are using SSL certificate to secure your internet site, it will affect the response time, shown on the purple line;

Waterfall View

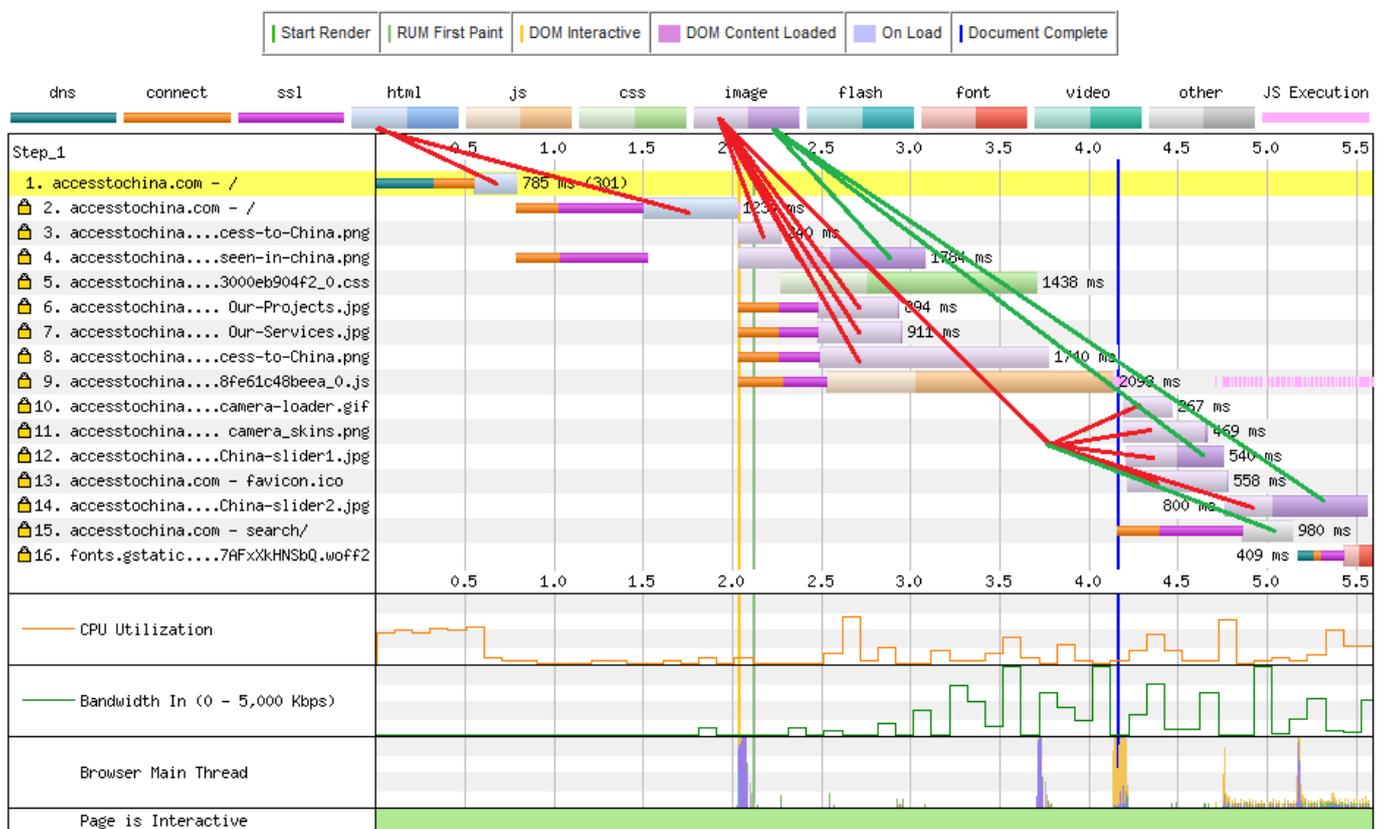


Each element that makes up a web page is shown and reported on the waterfall report. The lighter colours for each component is time it takes to load the first byte of data. The end of the line, in darker colour, is the time it has taken to load the element into the browser.



Here an example showing the HTML elements

Waterfall View



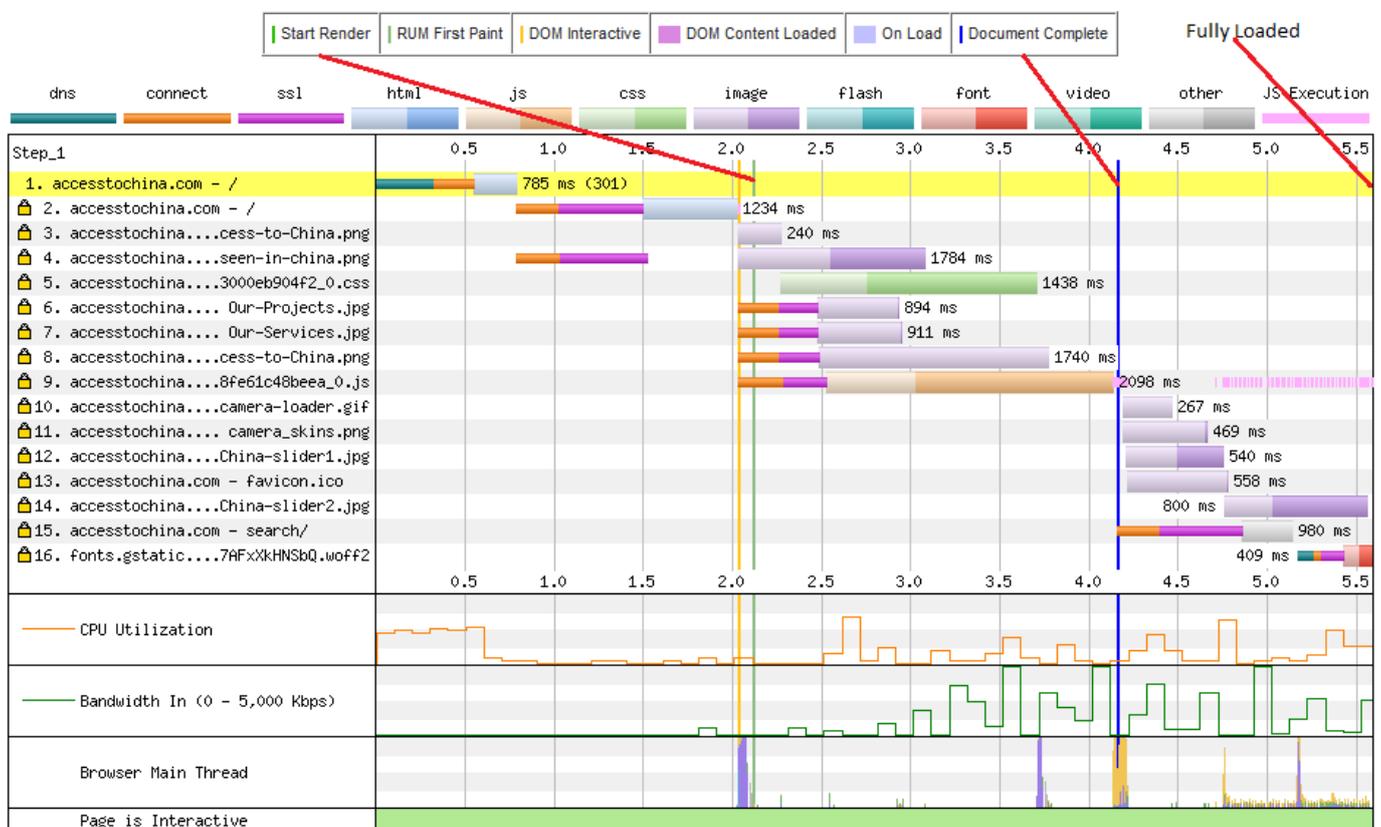
The overall response time is measured from the start to fully loaded. Fully loaded is when all the data of your web page has been collected.

The Start Render is where browser starts displaying information.

The Document Complete is where browser has displayed the full page of your internet site. This can be misleading if you are displaying a “Cookie” message or a script running in the back ground. This type of message often locks up a webpage until the web page is Fully Loaded.

If you have this problem on your internet site page the user will often be “clicking” on some of your internet site page and in doing often lock your internet site. This is while remote testing of your internet site is so important.

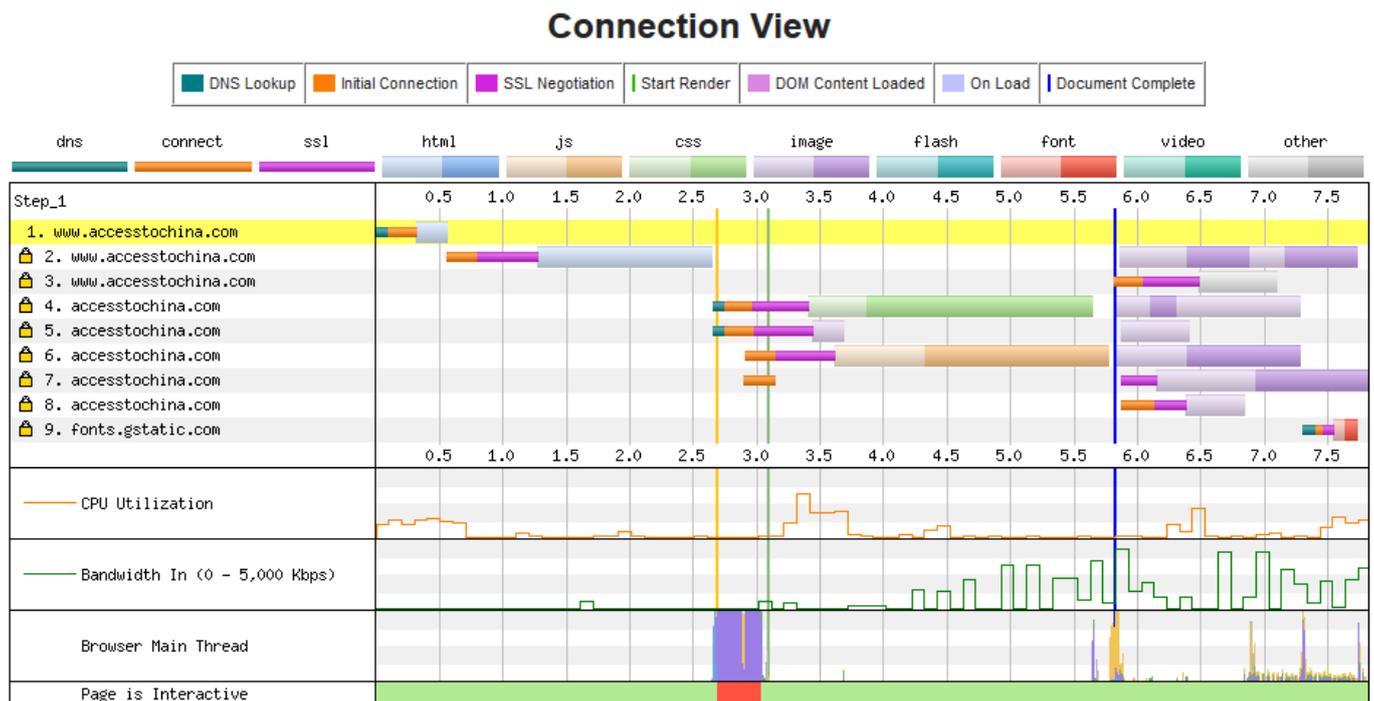
Waterfall View



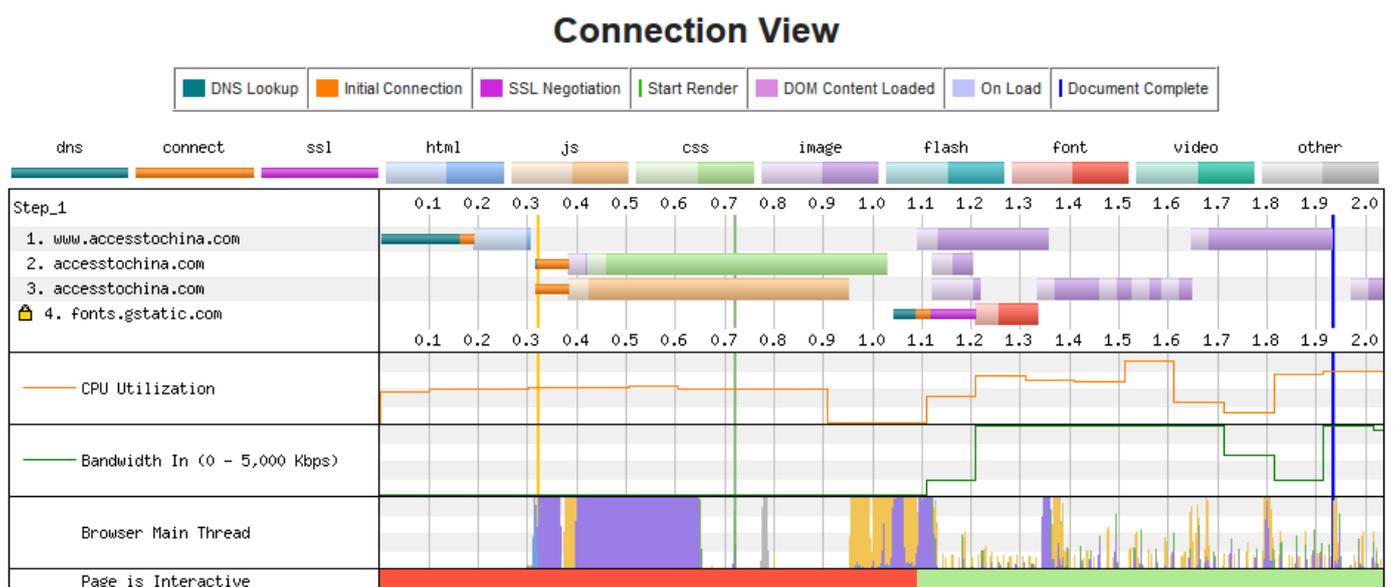
Connection View

This shows the connection between the browser and server. The slower the response time the more connection reviewed.

This connection view is accesstochina.com from a browser in China to a server in the UK.



This connection view is accesstochina.com from browser UK to server UK



Request detail report

The request detail report is a summary of the status codes the browser receives when trying to access your internet site. The example below where Google captcha is accessible from China. Below this is a list of status code for your reference.

Request Details

Before Start Render
Before On Load
After On Load

Request Details												
#	Resource	Content Type	Request Start	DNS Lookup	Initial Connection	SSL Negotiation	Time to First Byte	Content Download	Bytes Downloaded	Certificates	Error/Status Code	IP
1	http://ocsp.comodoca...CSsGAQUFBzABACM3D%3D	application/ocsp-response	0.856 s	84 ms	69 ms	-	75 ms	-	-	-	200	-
2	https://www.../product-presales	text/html	0.944 s	87 ms	296 ms	557 ms	736 ms	46 ms	6.8 KB	-	200	104.20.173.44
3	https://www.../app-f04db7da9.css	text/css	1.091 s	-	-	-	350 ms	612 ms	75.6 KB	-	200	104.20.173.44
4	https://www.../3a988cb43b905190.css	text/css	1.091 s	-	-	-	1013 ms	-	4.5 KB	-	200	104.20.173.44
5	https://www.../xQnnclGAuERQbYhaP2H7	text/css	1.091 s	-	-	-	969 ms	-	0.4 KB	-	200	104.20.173.44
6	https://www.../css/clientarea.css	text/css	1.092 s	-	-	-	975 ms	38 ms	15.9 KB	-	200	104.20.173.44
7	https://www.../assets/img/va-top.png	image/png	1.092 s	-	-	-	309 ms	-	1.5 KB	-	200	104.20.173.44
8	https://www.../assets/img/logo.png	image/png	1.092 s	-	-	-	642 ms	9 ms	3.3 KB	-	200	104.20.173.44
9	https://www.../assets/img/logo.svg	image/svg+xml	1.092 s	-	-	-	330 ms	4 ms	2.4 KB	-	200	104.20.173.44
10	https://www.google.c...captcha/api.js?hl=en	-	1.095 s	-	-	-	1265 ms	-	-	-	-1	-
11	https://www.../assets/img/unia-left.svg	image/svg+xml	1.708 s	-	-	-	301 ms	11 ms	2.8 KB	-	200	104.20.173.44
12	https://www.../js/dropdown.min.js	application/javascript	1.711 s	-	-	-	1538 ms	-	3.3 KB	-	200	104.20.173.44

CODE	INDICATION
2xx	Success
200	OK; the request was fulfilled.
201	OK; following a POST command.
202	OK; accepted for processing, but processing is not completed.
203	OK; partial information--the returned information is only partial.
204	OK; no response--request received but no information exists to send back.
3xx	Redirection
301	Moved--the data requested has a new location and the change is permanent.
302	Found--the data requested has a different URL temporarily.
303	Method--under discussion, a suggestion for the client to try another location.
304	Not Modified--the document has not been modified as expected.
4xx	Error seems to be in the client
400	Bad request--syntax problem in the request or it could not be satisfied.
401	Unauthorized--the client is not authorized to access data.
402	Payment required--indicates a charging scheme is in effect.
403	Forbidden--access not required even with authorization.
404	Not found--server could not find the given resource.
5xx	Error seems to be in the server
500	Internal Error--the server could not fulfil the request because of an unexpected condition.
501	Not implemented--the sever does not support the facility requested.
502	Server overloaded--high load (or servicing) in progress.
503	Gateway timeout--server waited for another service that did not complete in time.
-1	Denotes an aborted/timed out request (either the server is down or the client is not connected to the internet or the request was manually cancelled by the client) – this often the status when Chinese internet is blocking internet site content.

Request Header report

By expanding any of the request listed in the report you see the full details of what and how the browser is accessing your internet site page and where the information is been used, etc.

Request Headers

[+ Expand All](#)

- + Request 1: <http://www.accesstochina.com/>
- + Request 2: <https://www.accesstochina.com/>
- + Request 3: https://accesstochina.com/media/plg_jchoptimize/cache/css/6dc239ff6655fc7ac2755f5552bc8133_0.css
- + Request 4: <https://accesstochina.com/images/Access-to-China.png>
- + Request 5: https://accesstochina.com/media/plg_jchoptimize/cache/js/22d06b1206aa89a1ba7f395f197d57af_0.js
- + Request 6: https://accesstochina.com/modules/mod_slideshowck/themes/default/images/camera-loader.gif
- + Request 7: https://accesstochina.com/modules/mod_slideshowck/themes/default/images/camera_skins.png
- + Request 8: <https://www.accesstochina.com/images/home-slider/China-slider1.jpg>
- + Request 9: <https://accesstochina.com/templates/protostar/favicon.ico>
- + Request 10: <https://accesstochina.com/images/rtlogoshowcase/being-seen-in-china.png>
- + Request 11: <https://accesstochina.com/images/rtlogoshowcase/Our-Projects.jpg>
- + Request 12: <https://accesstochina.com/images/rtlogoshowcase/Our-Services.jpg>
- + Request 13: <https://accesstochina.com/images/qrcodes/Access-to-China.png>
- + Request 14: <https://www.accesstochina.com/index.php/component/search/?Itemid=101&format=opensearch>
- + Request 15: <https://www.accesstochina.com/images/home-slider/China-slider2.jpg>
- + Request 16: <https://fonts.gstatic.com/s/droidsans/v8/SIGVmQWMvZQldix7AFxXkHNSbQ.woff2>

Reviewing of your test results

If you have not used this type of testing service before we recommend the following steps in reviewing your test results

- 1) Check the social media and multimedia content for missing information
- 2) Check the “Full Load” time for your internet page. If greater than 8 seconds review the Waterfall reports and locate the parts of your internet site content that has the slow response times. These are the parts of your internet site content that will need changes for the Chinese market.
- 3) Check for the test report for error codes 400, 500, and -1. (internet site content not found)
- 4) Review the Waterfall report and compare with your “baseline” report. Focus on the differences. Again, these are parts of your internet site content that will need changes for the Chinese market.

For more information on the options available to change your internet site content for access to Chinese market, please see our [services](#)

Your Internet site cannot be seen in China

This does not happen very often, when your internet site cannot be seen at all. Please see “Chinese internet monitoring” in report “Publishing on the internet in China” to check that your internet site are not subjects that in blocked in China.

In most cases, where your internet site is blocked in China, is due to international social media. There is a few cases, not very often, where the IP address is blocked due to other internet site running on the same IP address which is not appropriate for the Chinese internet.

If is the case, ask your internet service provided to change your IP address for your internet site.

Fixing the web page performance issues

Below are the most common problems we have found and our recommendations to correct the web page performance issues.

In making your web page accessible to the Chinese internet you may be making additional problems for your local internet.

We do not recommend creating a second set of web pages for Chinese and / or Asia markets. Maintaining two or more internet site creates a very large overhead and can become a full-time job to manage. Our Core Data service which is low cost to use and low risk.

To keep within the sprite of open source here is the most common problems we see and how we have gone about fixing them.

Poor internet site design and coding

Not all internet site are written well for access over a slow internet.

Subject	Issue	Recommendation
Large sized images and videos	Images not been resized for user screen	Update coding and multimedia so that the sent over the internet at correct size to the end user. This change will improve greatly your mobile response world-wide.
Number of files that makes up your internet site page	The more files you have in your internet site page the slower the response time	Use the waterfall to determine the overall performance of having large number of files. If the number of files is reduced through redesign / recoding maybe required.
Number of files required by third party services	File needed to load third partly services e.g. Google Analytics	Use the waterfall to determine the overall performance of using third party services in China. A design change / replacement service maybe required
Scripts that lock the web page until all the site are loaded, e.g. "cookie acceptance"	User must wait for the full page to load before they access to internet site	Change the coding of the web page to prevent this happening

Social Media blocked on the Chinese internet

Most social media are blocked in China. There are ways around most of the issues this can create.

Subject	Issue	Recommendation
Images and videos	Blocked in China when images and videos from international social media	Copy and load the images and videos directly from your internet site server.
Social media icons	These can be slow to download from social media website or can be blocked	Copy and load the images and videos directly from your internet site server.
Cannot access international social media.	International social media blocked in China	Copy and load your international social media content to a Chinese social media platform

Third part services

Most third part services, with the exception of security services, are not blocked in China. Some of them are slowed down making them unusable in China.

The exception to this point is Google reCAPTCHA which is blocked.

Subject	Issue	Recommendation
Google Maps	Very slow to load in China, sometime does not load at all.	Replace Google maps with Bing or Baidu maps. With all mapping tools there is an option to display in Chinese. .
Google fonts	Can take up to 60 seconds to load a full copy of the font file.	Make a copy of Google fonts and load the files directly from your server
Google reCAPTCHA	This is blocked in China. If you used this on a web page your service will not work	Replace Google reCAPTCHA will a local tool running on your server.
Google Analytics	Like with all other Google services it is access speeds are slowed down	Monitor and remove / replace as required

Web page test links

Chinese web page testing

<https://webtest.accesstochina.com/>

Title	Chinese website performance free testing service
Description	Run a free Chinese website speed test from around the world using real browsers at consumer connection speeds with detailed optimization recommendations.

Chinese web page testing results page

<https://webtest.accesstochina.com/result/- test results code does here ->

Title	Chinese website Test Results
Description	Chinese website performance test result

Chinese web page testing results history

https://webtest.accesstochina.com/test_results_display.php

Title	Web page performance analysis for China
Description	Speed up the performance of your web pages in China with an automated analysis

Learn more about Chinese web page testing

<https://webtest.accesstochina.com/learnmore.php>

Title	Learn more about web page performance analysis for China
Description	Learn more how you can speed up the performance of your web pages in China with an automated analysis

About Access to China testing web test page

<https://webtest.accesstochina.com/about>

Title	About Access to China testing service
Description	About how you can test your website pages from China. How does your web page perform from mainland China?

Login and start testing in China

<https://webtest.accesstochina.com/user-code.php>

Title	Start your Chinese website performance testing
Description	Register and login to start testing your company website in China.