Instructions on how to use the HTTP-Trace extension for Chrome:

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TOOL DESCRIPTION

The HTTP-Trace extension for Chrome captures the HTTP requests and responses sent between the browser and the web server. We built it to analyze network traces to study characteristics of these interactions for popular web applications. We want to do these experiments on both desktop and mobile versions of the web application.

INSTALLATION

NOTE: You can install the extension on your Google Chrome installation. However, since this extension clears your browser history and accesses network data, we recommend that you install it on a separate install of Chromium (the open source browser behind Chrome). You can get it from:
- https://download-chromium.appspot.com (Windows / Mac / Linux)
- http://crportable.sourceforge.net/ (Portable Version – Windows Only)

If you are not using a separate Chrome/Chromium install, please disable any extension that adds/modifies content into the webpage including Adblock, Lastpass, LibX etc.

Here are the steps to install the extension:

WEBSTORE INSTALLATION
Install the extension from the webstore:
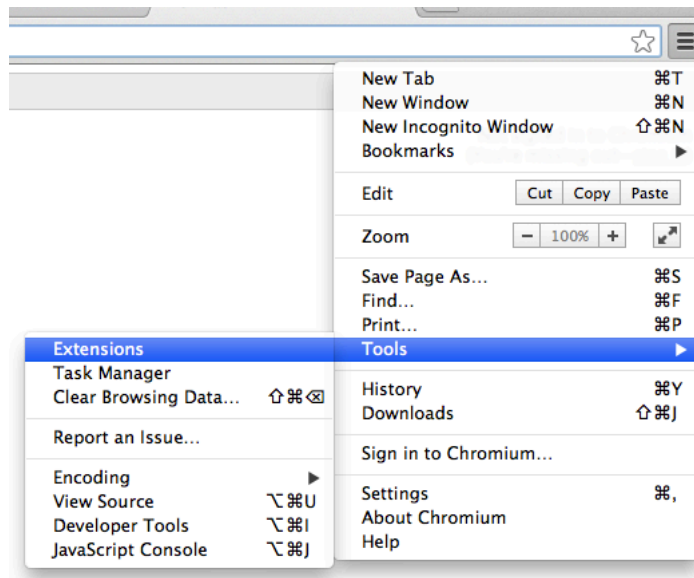https://chrome.google.com/webstore/detail/http-trace-capture/mepoamdlmipfblemapenfhkpdeklfoin

MANUAL INSTALLATION (If WebStore Installation doesn't work)
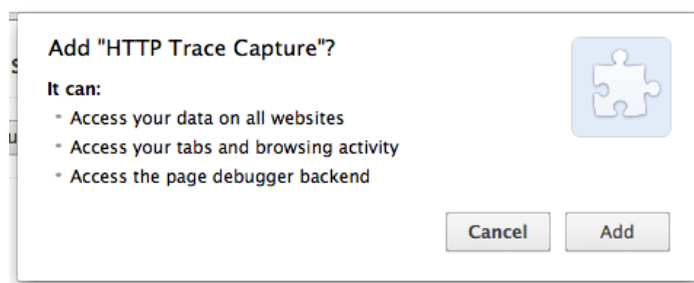
STEP 1.   Download the extension file.
Download the crx file (Right-Click + Save)
http://www.cc.gatech.edu/~shauvik/http-trace.php

STEP 2.   Open Chromium and navigate to **Button > Tools > Extensions**

STEP 3.   You should see the Extensions window. Now Drag & drop the crx file
into this window and you should see the following prompt. Click on Add.

Permissions Note: The extension permissions means that it can collect data
from any page you ask it to by hooking into the browser's debugger to access
the activity on the page. It doesn't capture all your sites – Don't worry! ☺
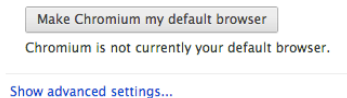
POST INSTALL STEPS

STEP 1.   Once the extension has been installed, you will see the following icon
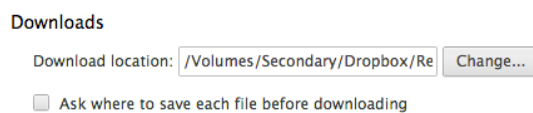for the extension on the top right: ⊙

STEP 2.   Before running the extension, make sure you select a folder where all
the trace logs will be saved. Go to Chrome button > Settings
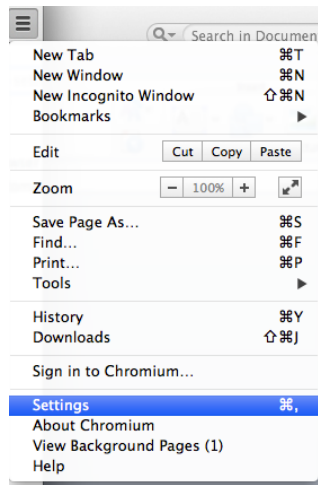
Next, scroll down and click on "Show advanced settings"

Then, in the Downloads section, select a new folder by clicking on Change.

Note that this is necessary as we will ask you to zip and send this folder for
every website you collect data for.

COLLECTING DATA

STEP 1.   Open the extension by clicking on this icon while on a page will open a new tab and bring up a separate extension window.
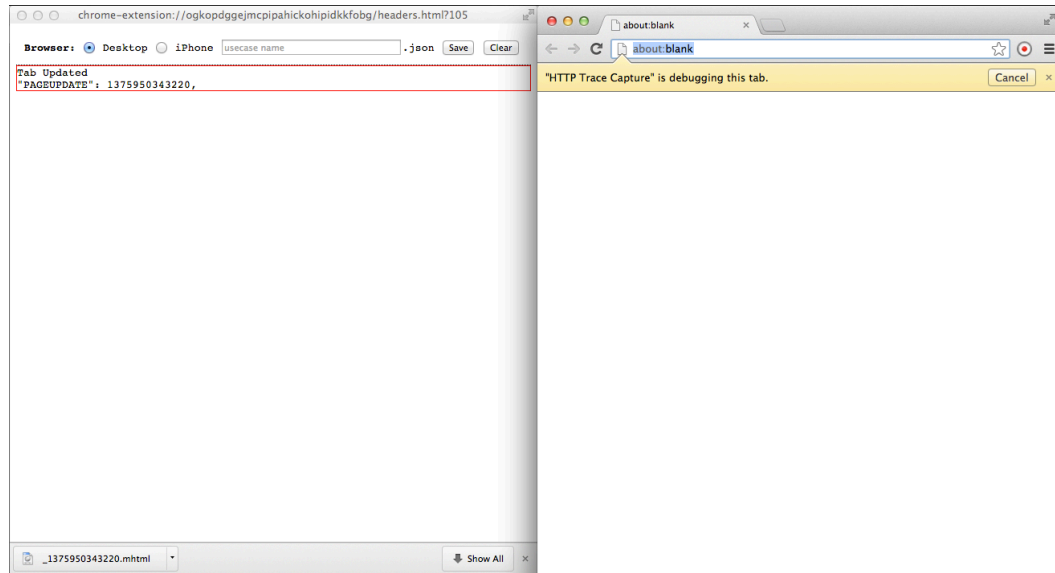
A couple of things to note in the extension UI are the radio buttons -- "Desktop" and "iPhone". You will use them to switch the browser's behavior. The next text box is the place you will enter the usecase you are exercising. i.e., the website functionality you are performing while capturing data. The "Save" button saves the collected logs and the "Clear" button clears browsing history, making you ready for another trace capture!

Also, note that there is yellow notification bar with the message "HTTP Trace Capture is debugging this tab". That will remain as long as the extension is capturing the data. If you don't see it, something is wrong ☺ i.e., the debugger is no longer attached to the page. So, you might want to close and reopen the debugger.

Every time the page loads, the extension will save the page data as well in a file. If you are navigating many pages, sometimes Chrome might ask you if you want to download all those files. Choose "Allow".
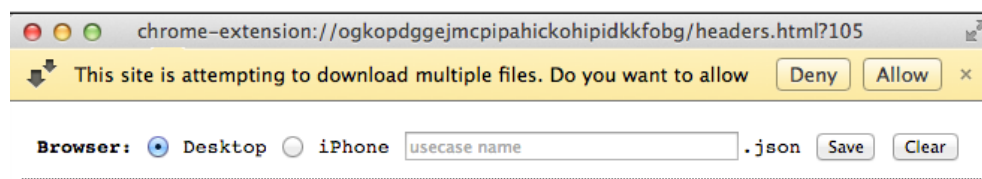
STEP 2.   Replace "about:blank" with the website root URL, such as www.google.com and start interacting with it.

STEP 3.   While you are interacting with the web application, you will see that the network data being captured is appearing in the extension window. Here is a sample screen while it is being captured.
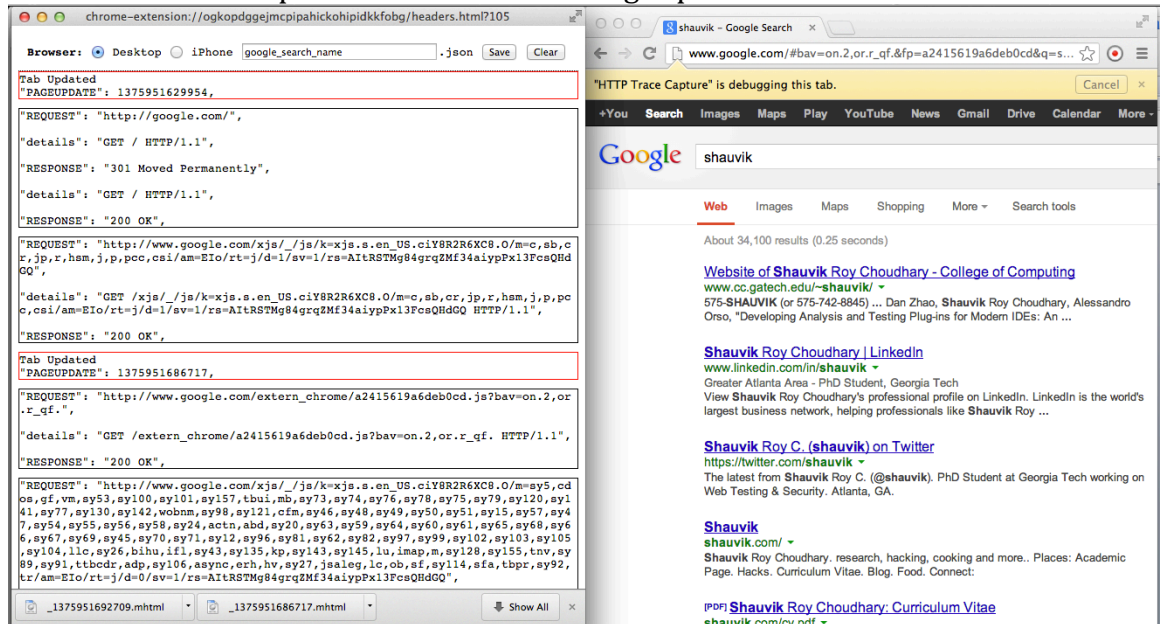
STEP 4.   After you are done, make sure you have written the name of the usecase (functionality accessed) and then click Save. This will save a JSON file with the trace data. To start capturing a new usecase, click on Clear and your browsing session will be reset.

STEP 5.   For all usecases of the same site, make sure you start with the same root URL (e.g., www.google.com)

STEP 6.   Repeat steps 1 to 5 for all use cases on all platforms (desktop and mobile).

REPORTING BUGS

If you have any issues running the tool, please email shauvik@gatech.edu to report bugs or for any help needed.

FAQ

[1] **Q:** *Why do you need a browser extension? Can't you capture my network traffic directly?*
A: Often web application data is sent in encrypted format (HTTPS). Hence, we need to tap into the browser to get the information.

[2] **Q:** *I changed the radio button to Mobile but still I can't see the mobile version of the website. Why? How can I fix that?*
A: Our extension just changes the User-Agent of the browser. Some websites have a complex logic to determine if the request is from a mobile browser. Please report the website URL if you find this issue. In such a case, you can sometimes use a mobile root URL such as http://mobile.twitter.com instead of http://twitter.com to test the website.