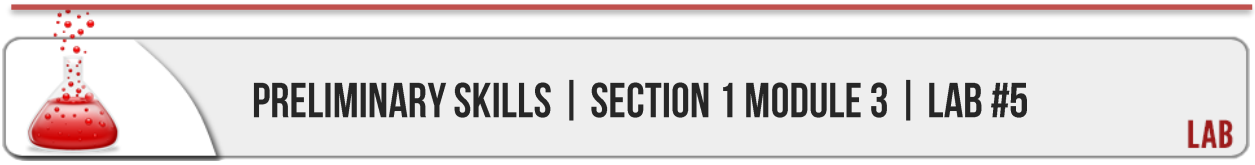
eLearnSecurity
Forging security professionals

BURP SUITE



1. Description

A local police department has hired you to pentest their website. They had a new website created by a web development company and they want to make sure that everything is secure and in order.

In this lab you will practice with Burp Suite, configuring the scope of the engagement, intercepting the communications with a webserver and *spidering* a target web application. You can access the target web application at the following address **10.100.13.5**.

2. Goal

The goal of this lab is to test the given web application in order to find a hidden path that contains a restricted area. Once the hidden path is discovered, your goal will be to bypass the authentication exploiting a "***feature***" left over by the developers while "debugging" the area.

3. Tools

The best tools for this lab are:

- Web browser
- Burp Suite

4. Steps

4.1. Explore the web application

Explore the Web application at the address 10.100.13.5 and verify that everything works as intended. You should see the Police Department website.

4.2. Configuring your arsenal

Before starting analyzing the target application, configure your browser and Burp Suite. Do not forget to configure the ***scope of the engagement*** in order to analyze only requests and responses that belong to that scope, and filter the site map to show ***only in-scope*** items.

At the end of the configurations, perform a test to make sure that everything works as intended.

4.3. Mapping the target application

Some resources are hidden and performing an active crawling of the application, by following links, submitting forms, parsing responses, etc. requires time. Find a way to automate all of these operations in one click!

4.4. The Keystone

The automated mapping should have revealed a *hidden path*. Explore the path and extract useful information to reach your goal. You should note that developers are full of "magic tricks", find the one used in this application and you will find the **keystone**.

SOLUTIONS

Please go ahead **ONLY** if you have **COMPLETED** the lab or you are stuck! Checking the solutions before actually trying the concepts and techniques you studied in the course, will dramatically reduce the benefits of a hands-on lab!

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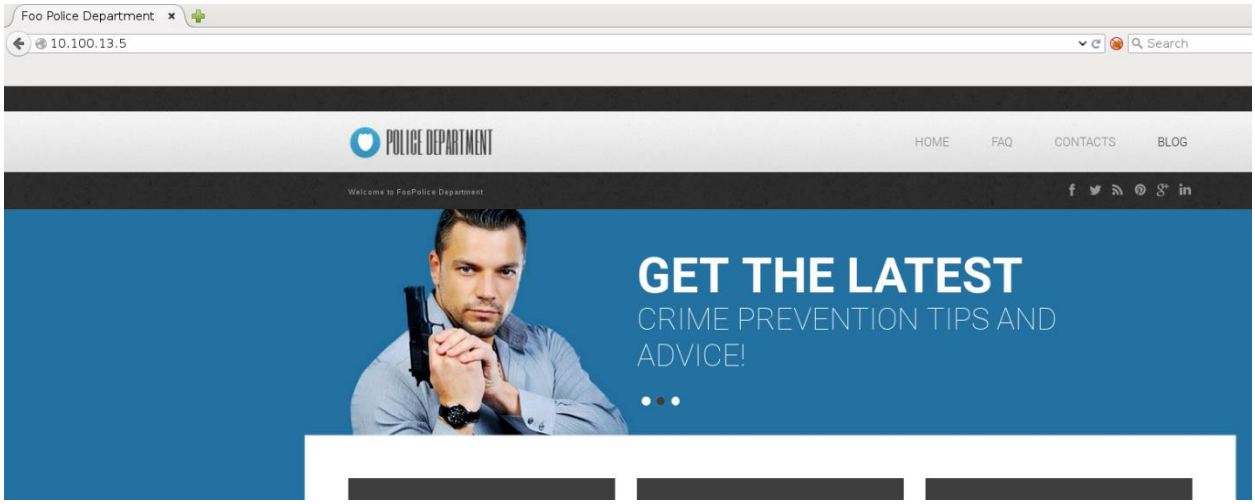
5. Solutions steps

5.1. Explore the web application

You should see a page like this:

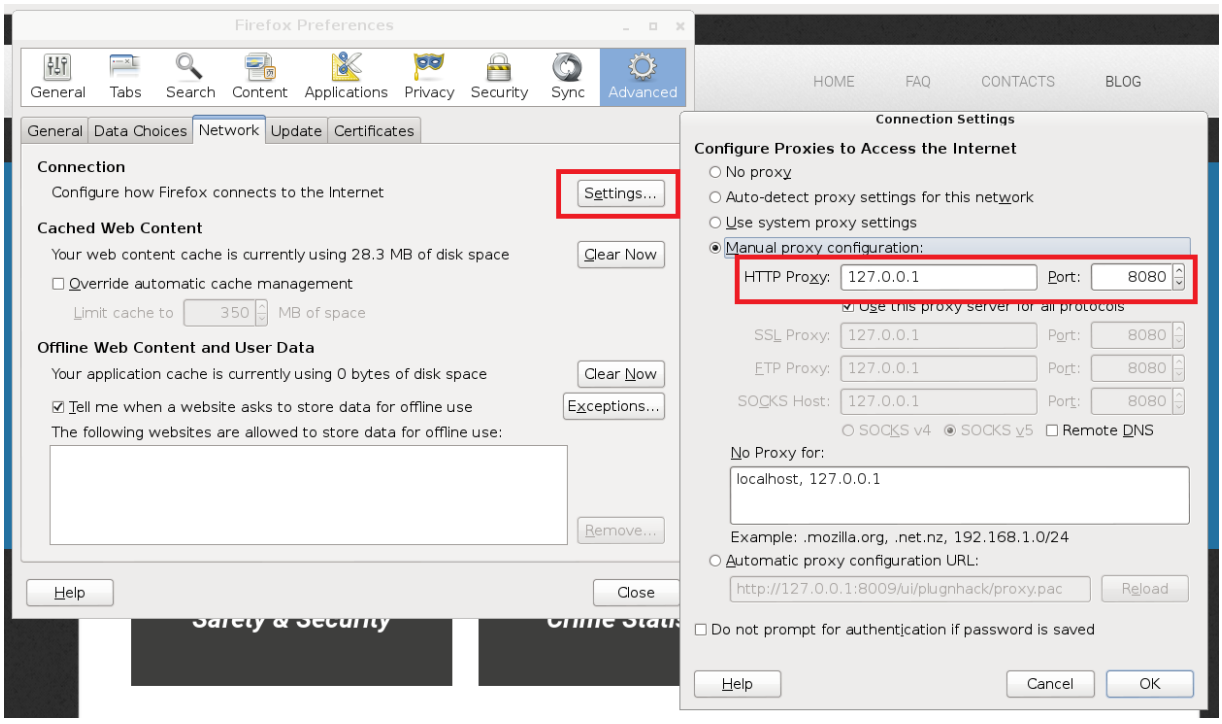


Welcome to **Foo Police Department**!

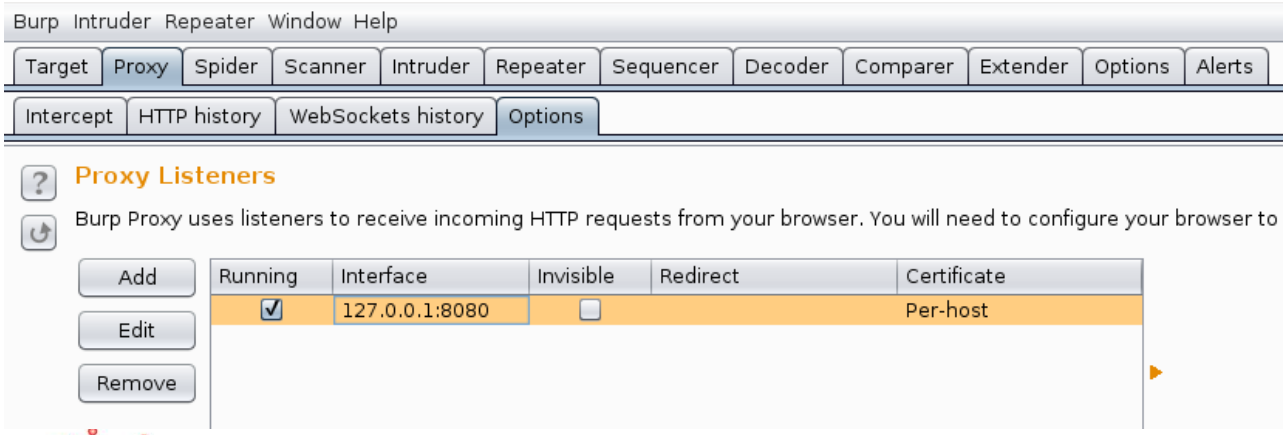
5.2. CONFIGURING YOUR ARSENAL

In order to analyze the traffic, spider the targeted web application and discover the hidden path of the restricted area. You need to setup the proxy both in your browser and in Burp Proxy.

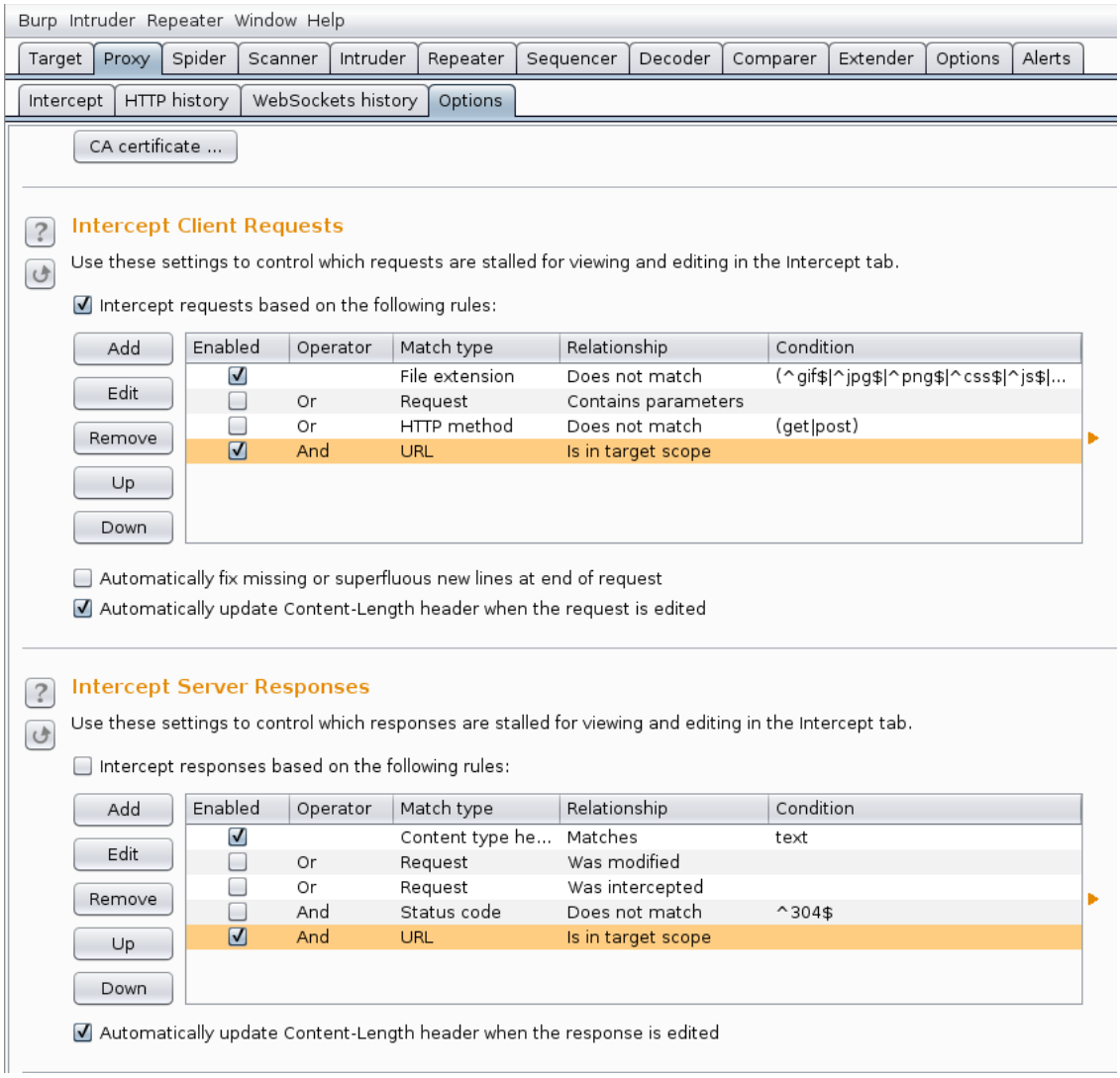
In your browser



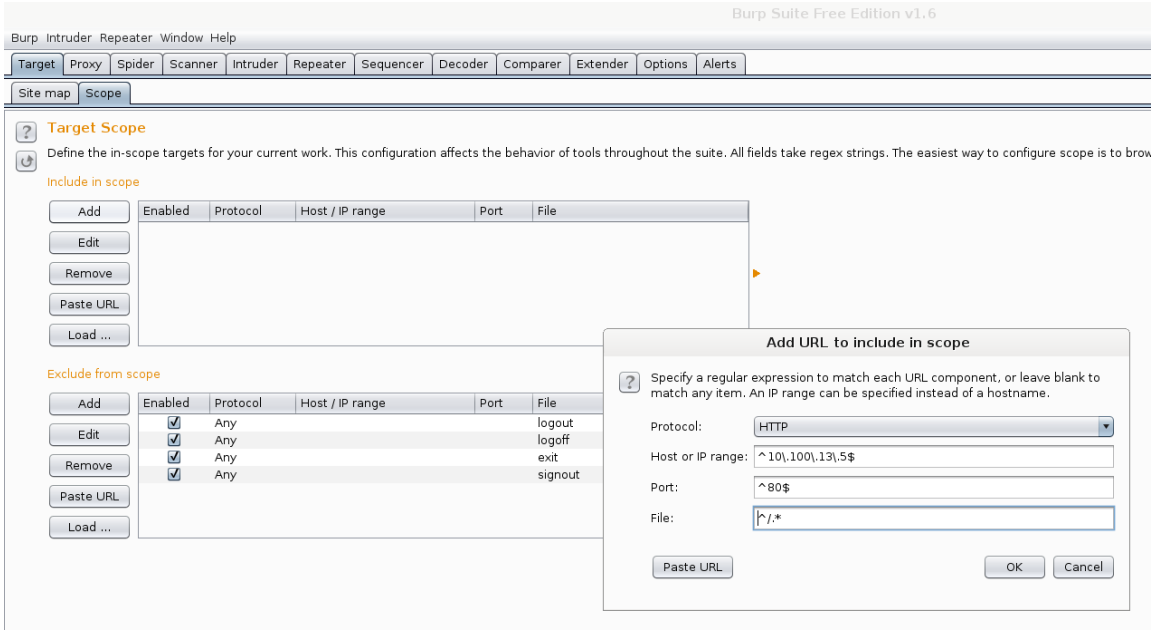
In Burp Proxy



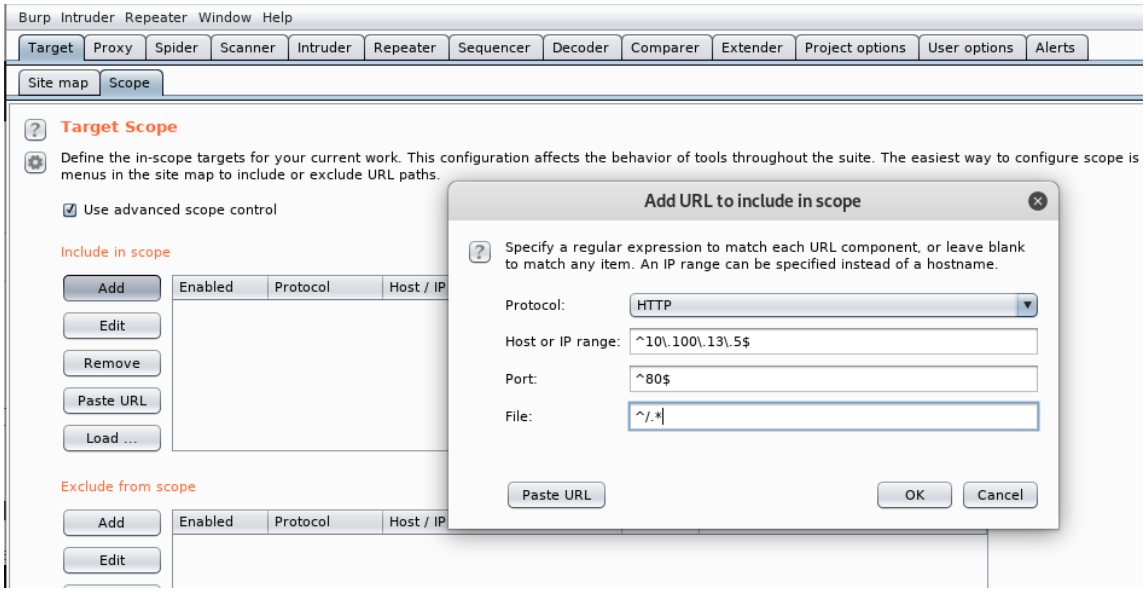
In addition to the listener, it's a best practice to configure the proxy to intercept request and responses that belongs to the **targets in scope**:



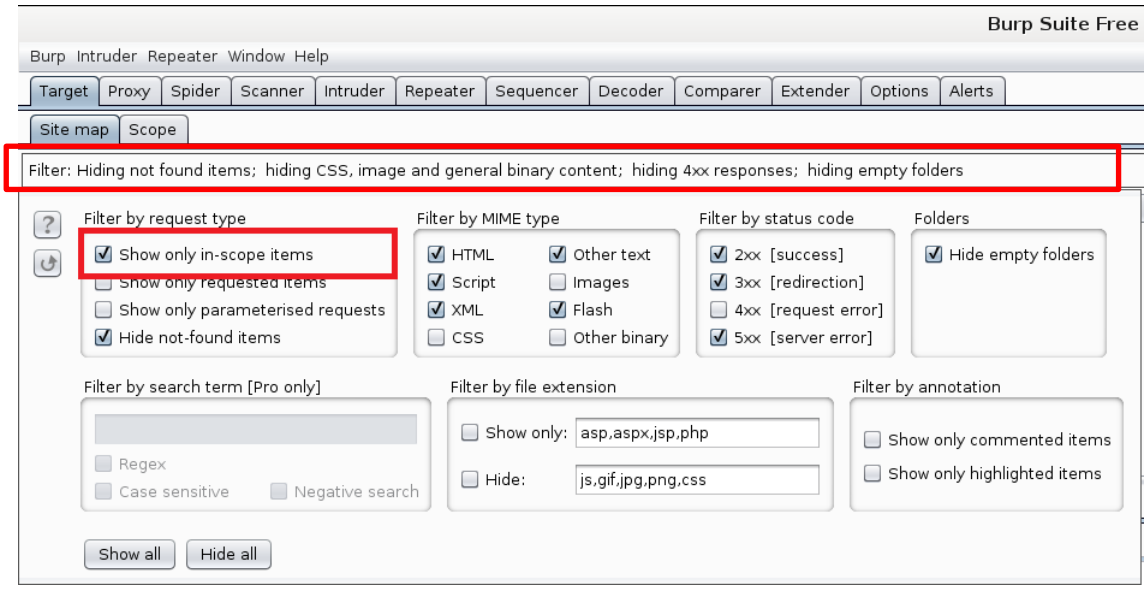
To configure the scope of engagement browse the tab ***Target*** and then ***Scope***. To add a URL to the scope you can paste the link or type it manually.



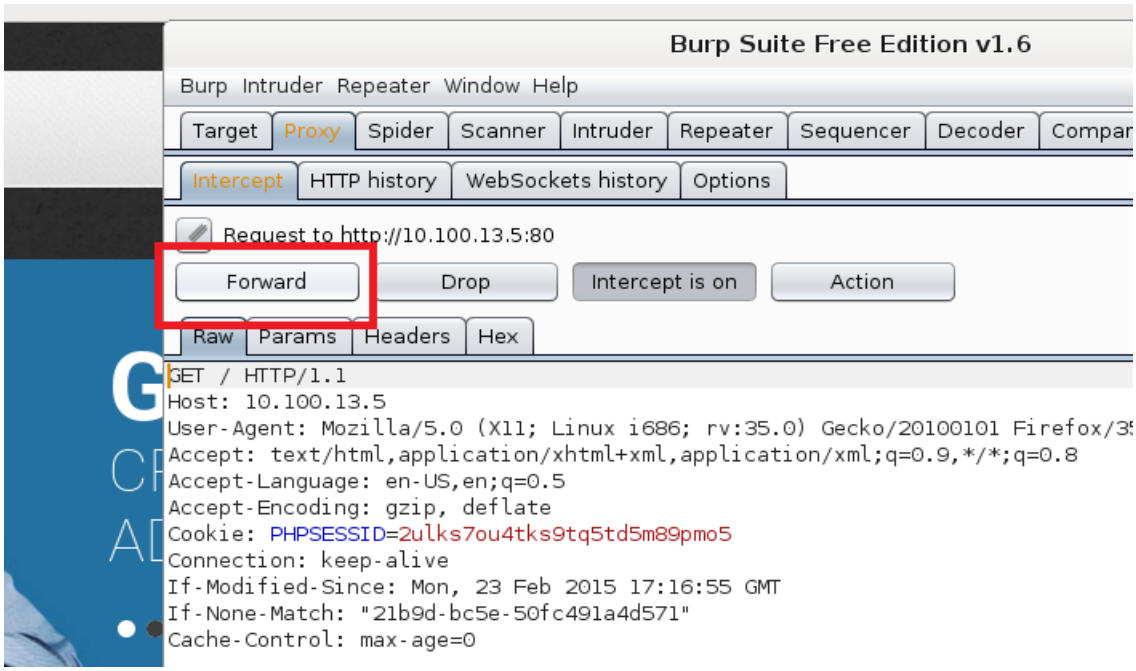
<u>In latest version of Burp Suite, you will need to click the "Use advanced scope control" checkbox before you can specify the scope in that form, as shown in the screenshots below:</u>



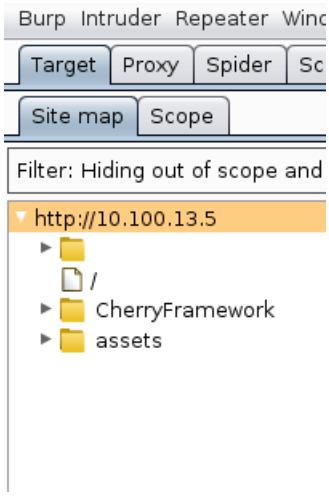
In the ***site map***, configure the filter by request type adding a tick to "*Show only in-scope items*". This will show you only the resources that belong to the scope defined previously.



To test if your configurations are working as intended, just refresh the link into the browser and verify that the intercept has captured your request. If not, be sure the *Intercept* button is toggled.

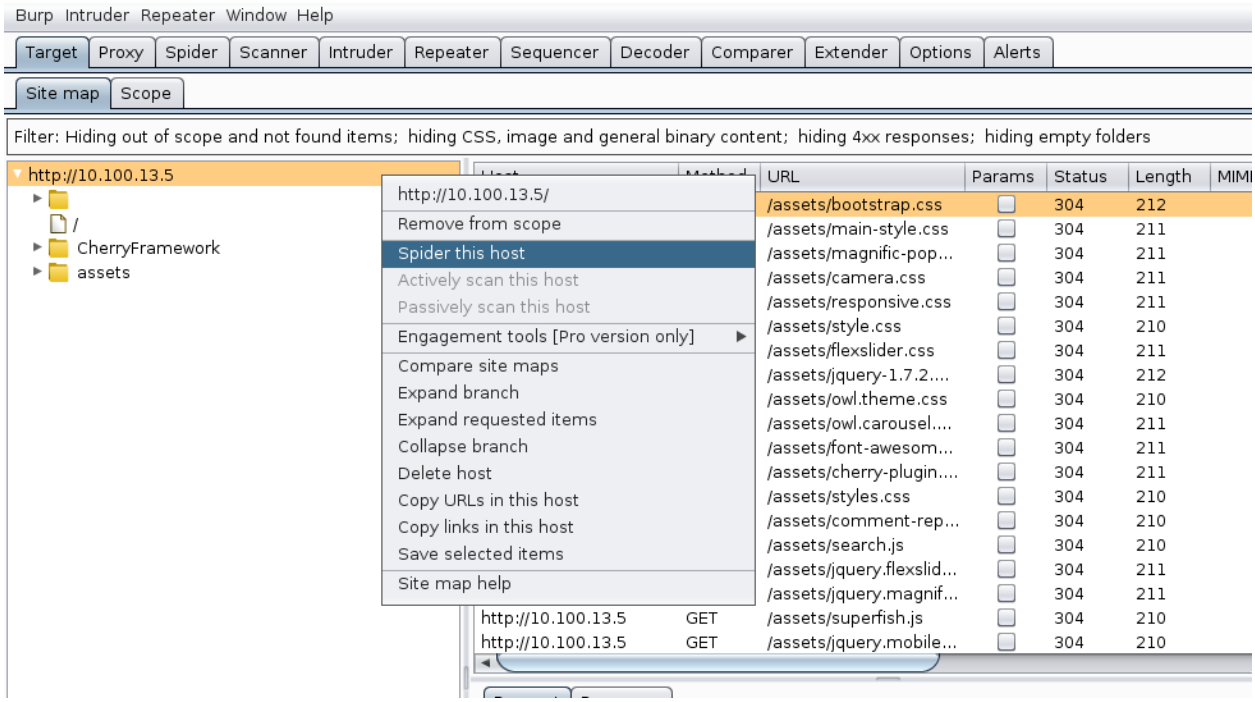


Once forwarded all the requests and responses, you should see the list of the resources exchanged in the *Target > Site map* tab:

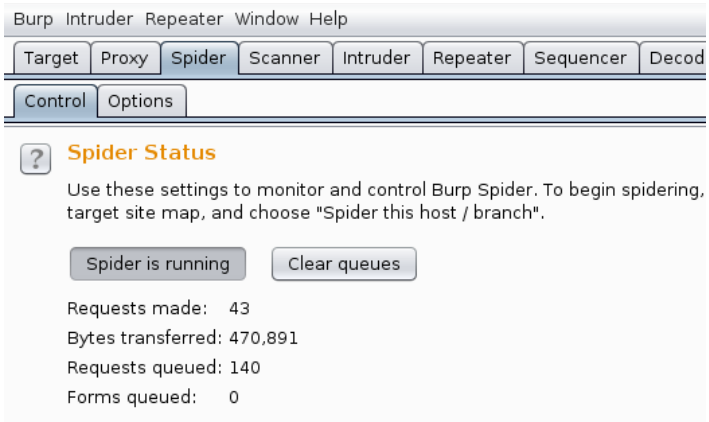


5.3. MAPPING THE TARGET APPLICATION

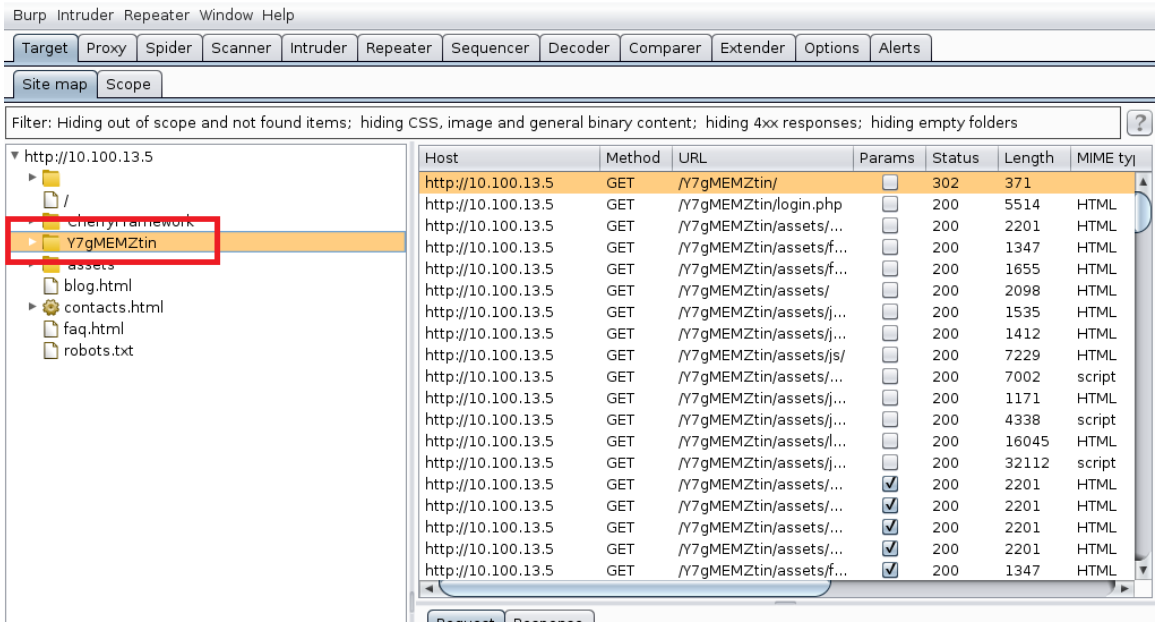
In order to automatically map the target web application we can use the Burp Spider tool. To do this, just right click on the target host in the site map list. Then select "***Spider this host***":



In the Spider tab you'll see the status of this operation:

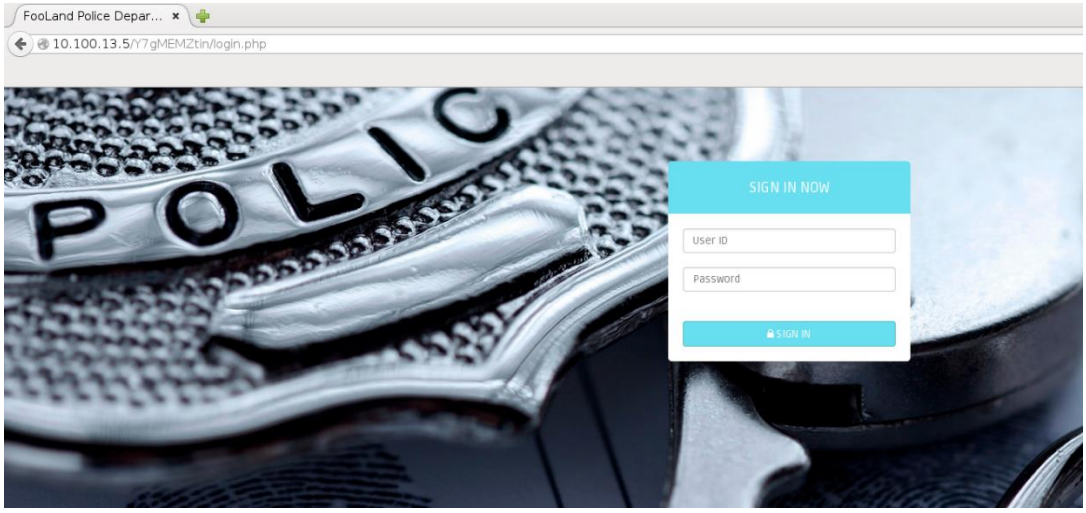


After a while, you should see a list of paths on the ***Site Map*** that were not listed before. One of them is the hidden area we are looking for:



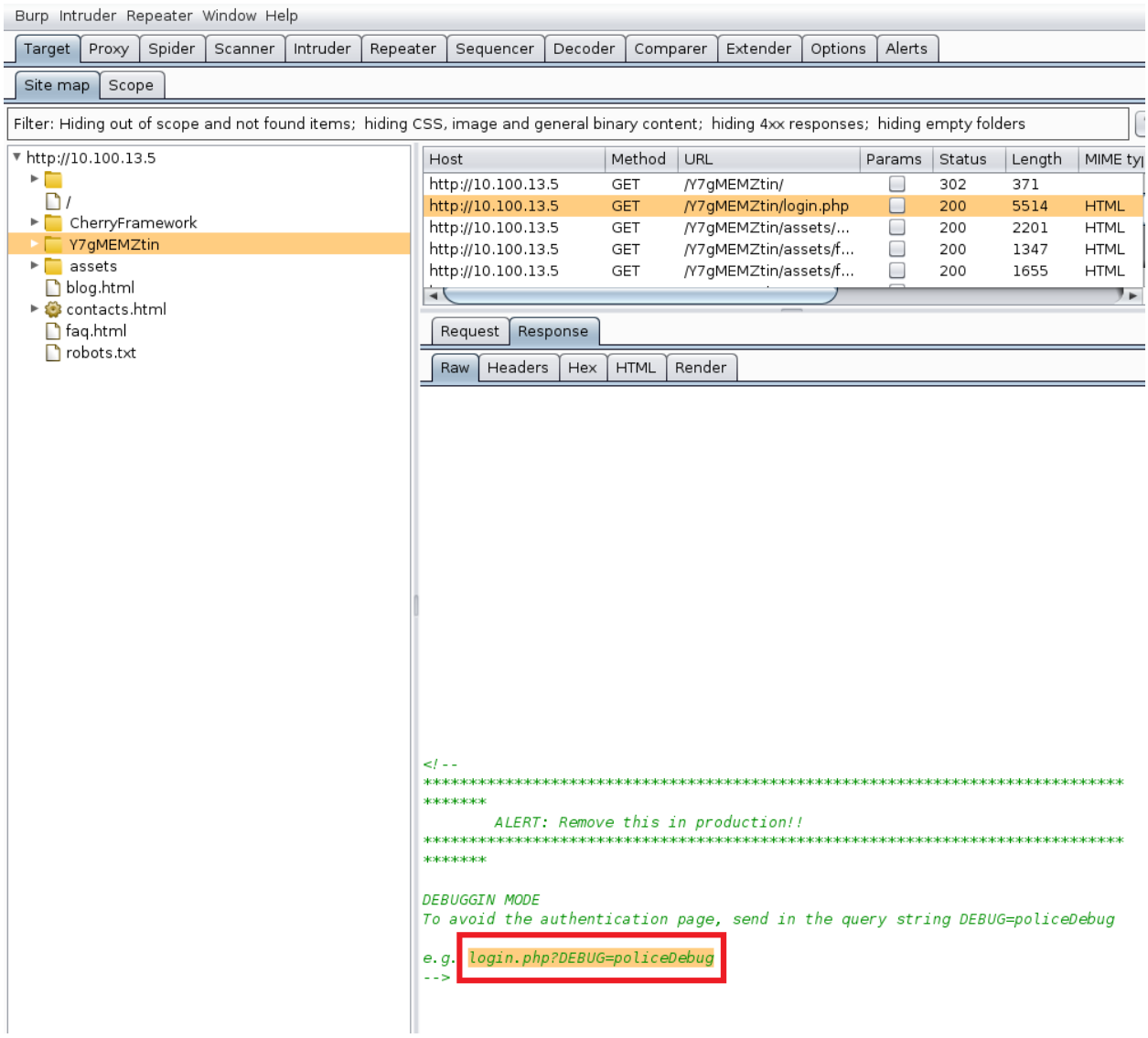
5.4. The Keystone

Visiting the *hidden path*, you should notice that the application exposes an authentication page. It requires a login and you don't have one.

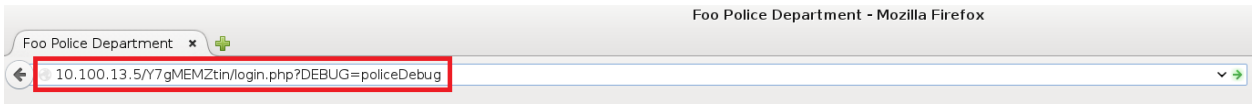


The next step needs to analyze this page in order to find something useful to bypass the authentication.

Analyzing the server response to the ***login.php*** resource, you should have noticed that at the end of the file there is a debugging message. The developers implemented a simple login bypass to avoid the authentication during the debugging operations and forgot to remove the message in production.



Requesting the login path with the parameters suggested by the developers:



You will access the restricted area and reach the goal of this lab!
You also notify your client of your findings and successfully close your engagement.