Chapter 2

Footprinting and Reconnaissance

Lab Manual

THIS DOCUMENT INCLUDES ADDITIONAL PRCTICALS WHICH MAY OR MAY NOT BE COVERED DURING CLASSROOM TRAINING. FOR MORE DETAILS APPROACH LAB COORDINATORS

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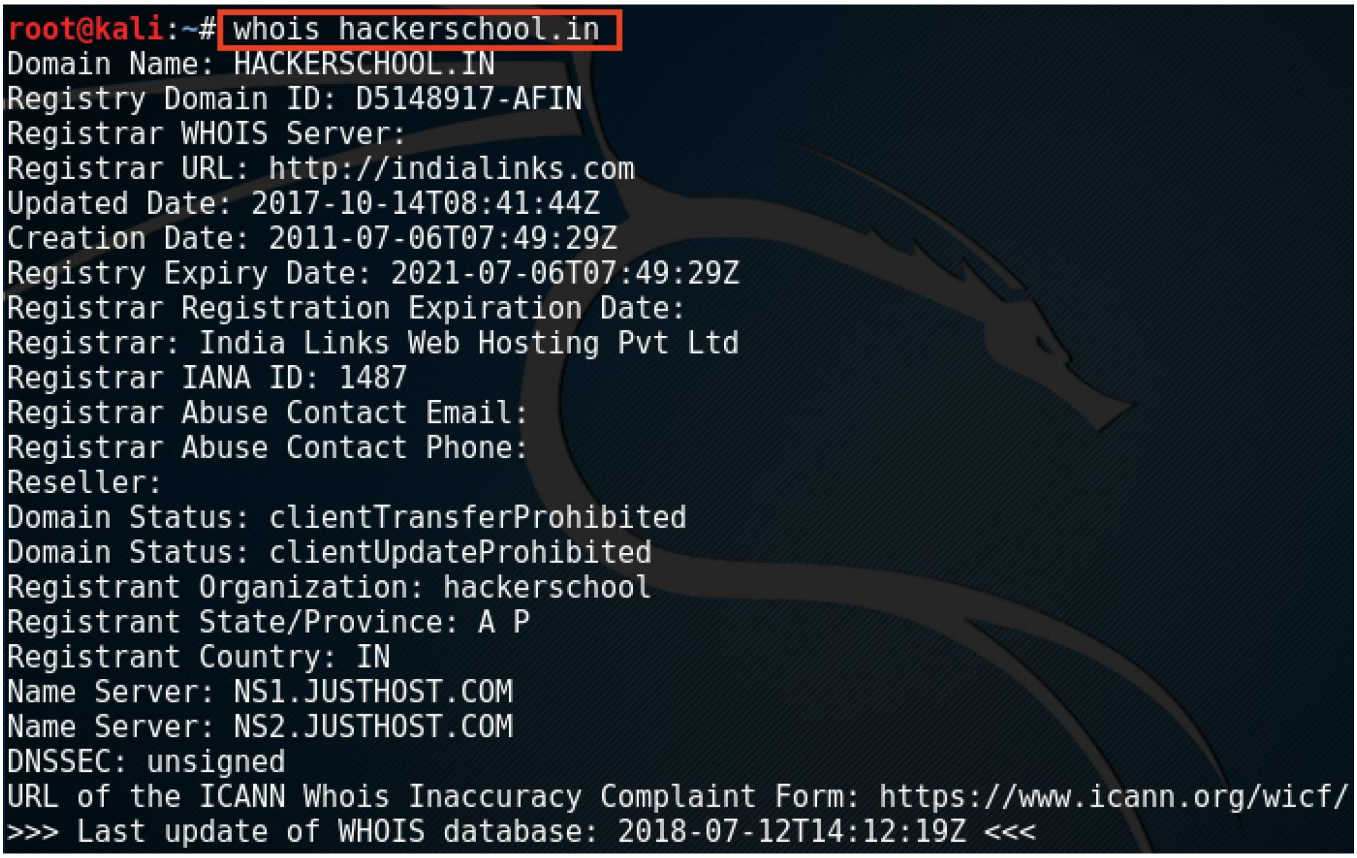
Practical 1: Finding domain registration details with Whois tool

WHOIS is used to gather information related to the domain name and DNS details of the target.

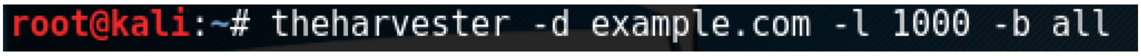
Enter the following command to perform ***Whois*** operation on target. In this case, we are targeting ***hackerschool.in***



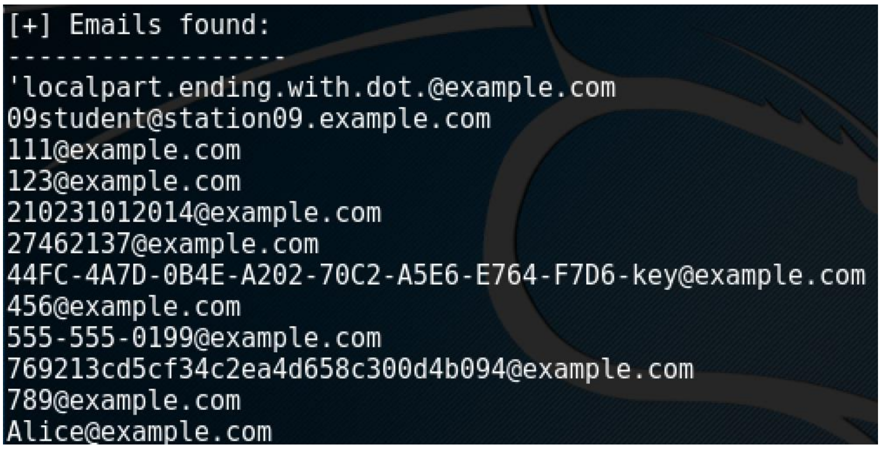
```
root@kali:~# whois hackerschool.in
Domain Name: HACKERSCHOOL.IN
Registry Domain ID: D5148917-AFIN
Registrar WHOIS Server:
Registrar URL: http://indialinks.com
Updated Date: 2017-10-14T08:41:44Z
Creation Date: 2011-07-06T07:49:29Z
Registry Expiry Date: 2021-07-06T07:49:29Z
Registrar Registration Expiration Date:
Registrar: India Links Web Hosting Pvt Ltd
Registrar IANA ID: 1487
Registrar Abuse Contact Email:
Registrar Abuse Contact Phone:
Reseller:
Domain Status: clientTransferProhibited
Domain Status: clientUpdateProhibited
Registrant Organization: hackerschool
Registrant State/Province: A P
Registrant Country: IN
Name Server: NS1.JUSTHOST.COM
Name Server: NS2.JUSTHOST.COM
DNSSEC: unsigned
URL of the ICANN Whois Inaccuracy Complaint Form: https://www.icann.org/wicf/
>>> Last update of WHOIS database: 2018-07-12T14:12:19Z <<<
```

Practical 2: Extracting Emails and subdomains details using the harvester

This tool is to gather emails, subdomains, hosts, employee names, open ports and banners from different public sources like Google, Bing and other search engines.



```
root@kali:~# theharvester -d example.com -l 1000 -b all
```

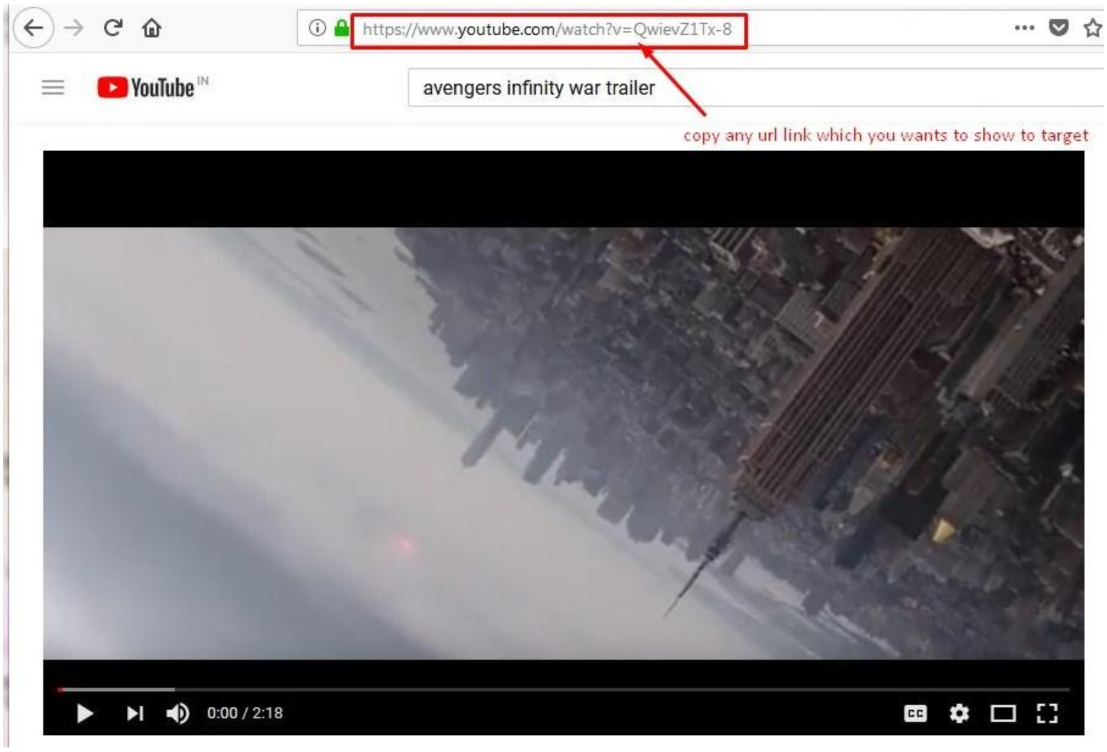


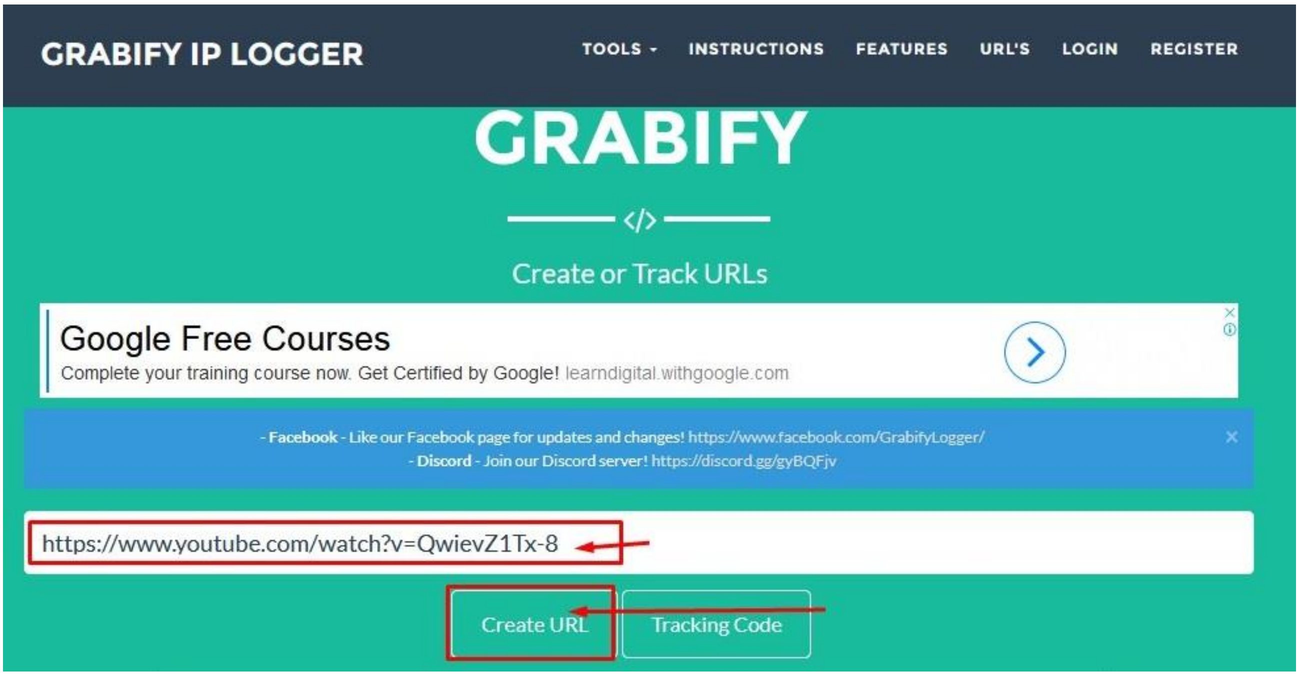
```
[+] Emails found:
------------------
'localpart.ending.with.dot.@example.com
09student@station09.example.com
111@example.com
123@example.com
210231012014@example.com
27462137@example.com
44FC-4A7D-0B4E-A202-70C2-A5E6-E764-F7D6-key@example.com
456@example.com
555-555-0199@example.com
769213cd5cf34c2ea4d658c300d4b094@example.com
789@example.com
Alice@example.com
```

Practical 3: To find out targets IP address using IP tracking technique.

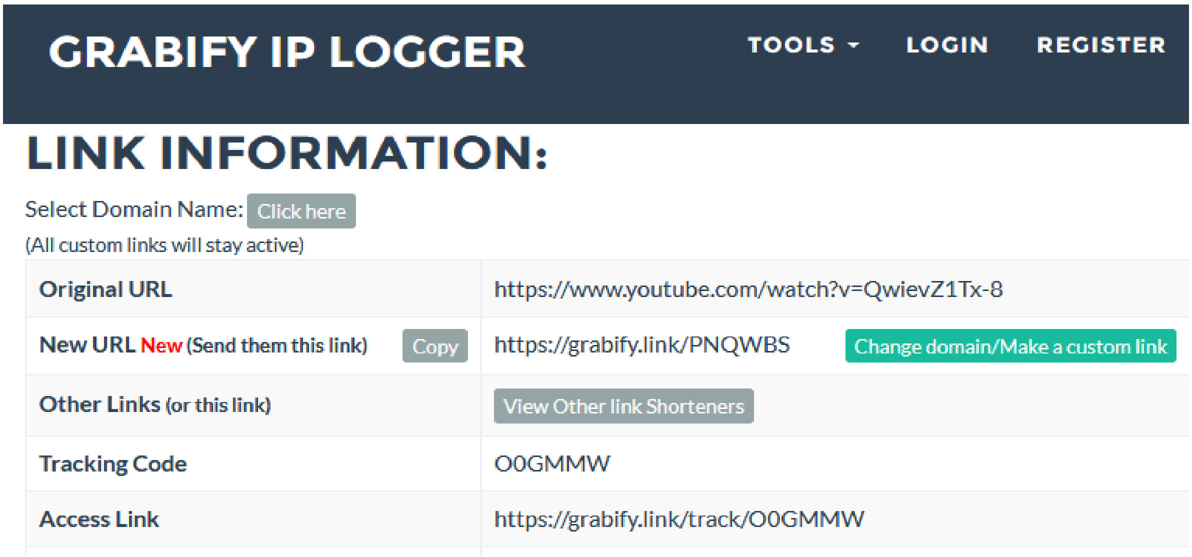
Visit Grabify IP logging website https://grabify.link/

This website creates a tracking link which helps in identifying targets IP address. To perform this task, we are trying to convince our target to click on it tracking link that redirects target towards a youtube video. Create an IP tracking link by using grabify website; it requires valid URL (In this case we are converting youtube video link as an IP tracking link)


https://www.youtube.com/watch?v=QwievZ1Tx-8
YouTube IN
avengers infinity war trailer
copy any url link which you wants to show to target
0:00 / 2:18


GRABIFY IP LOGGER
TOOLS
INSTRUCTIONS
FEATURES
URL'S
LOGIN
REGISTER
GRABIFY
</>
Create or Track URLs
Google Free Courses
Complete your training course now. Get Certified by Google! learndigital.withgoogle.com
- Facebook - Like our Facebook page for updates and changes! https://www.facebook.com/GrabifyLogger/
- Discord - Join our Discord server! https://discord.gg/gyBQFjv
https://www.youtube.com/watch?v=QwievZ1Tx-8
Create URL
Tracking Code

After clicking on ***Create URL*** button, the website generates IP tracking URL displayed in ***New URL section***, which you can share with a target to grab IP address.



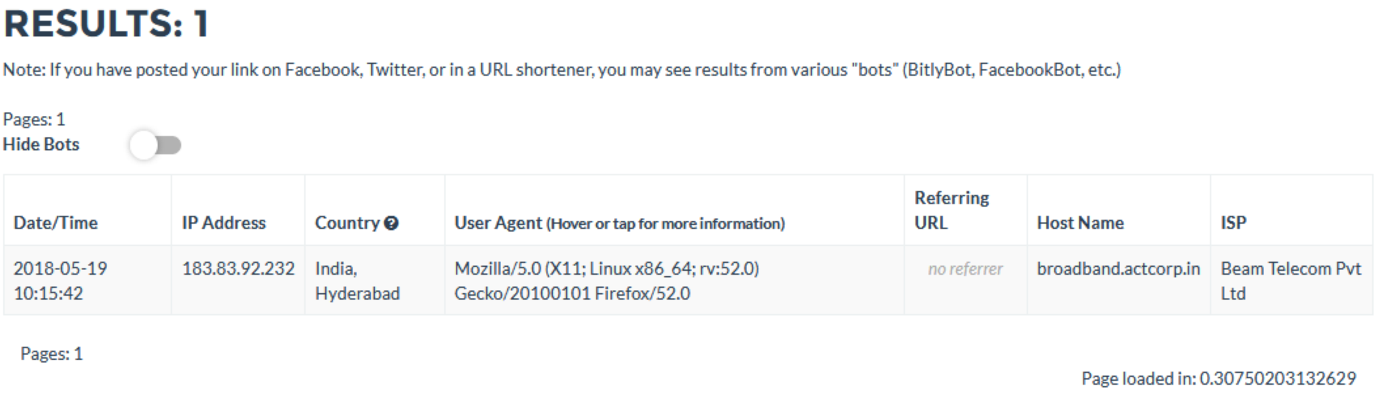
LINK INFORMATION:

Select Domain Name: Click here

(All custom links will stay active)

Original URL	https://www.youtube.com/watch?v=QwievZ1Tx-8
New URL New (Send them this link) Copy	https://grabify.link/PNQWBS Change domain/Make a custom link
Other Links (or this link)	View Other link Shorteners
Tracking Code	O0GMMW
Access Link	https://grabify.link/track/O0GMMW

If the target click on the link, the target's IP address will be displayed on the same page as shown below



RESULTS: 1

Note: If you have posted your link on Facebook, Twitter, or in a URL shortener, you may see results from various "bots" (BitlyBot, FacebookBot, etc.)

Pages: 1

Hide Bots

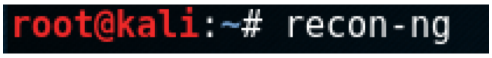
Date/Time	IP Address	Country	User Agent (Hover or tap for more information)	Referring URL	Host Name	ISP
2018-05-19 10:15:42	183.83.92.232	India, Hyderabad	Mozilla/5.0 (X11; Linux x86_64; rv:52.0) Gecko/20100101 Firefox/52.0	no referrer	broadband.actcorp.in	Beam Telecom Pvt Ltd

Pages: 1

Page loaded in: 0.30750203132629

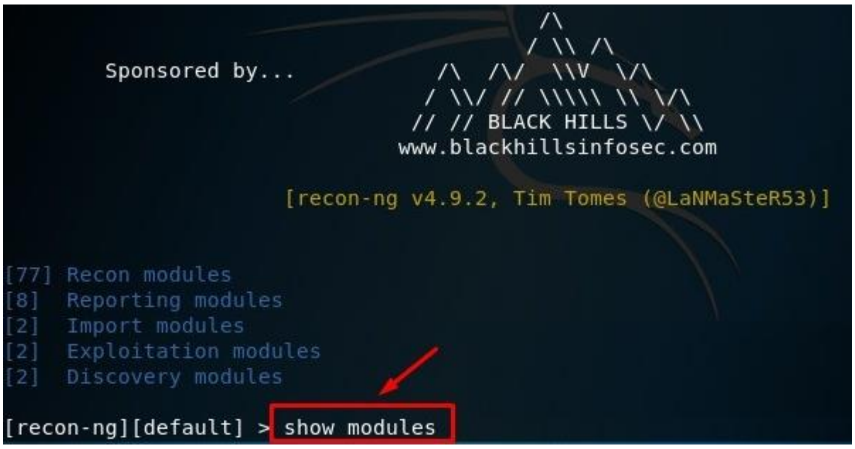
Practical 4: Footprinting domain using Recon-ng tool

To launch the recon-ng tool, execute the following command in terminal

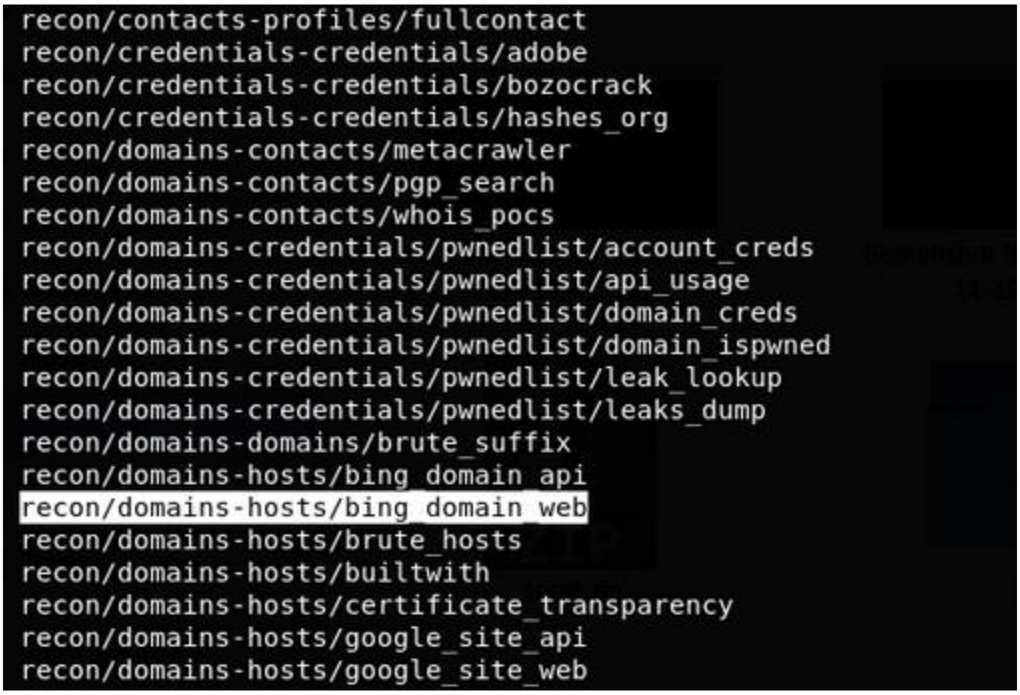


```
root@kali:~# recon-ng
```

Execute the below command, to list out the modules.

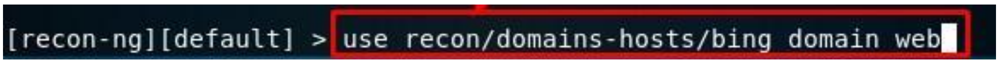


```
                                               /\
                                              / \\ /\
        Sponsored by...               /\  /\/  \\V  \/\
                                     / \\/ // \\\\\ \\ \/\
                                    // // BLACK HILLS \/ \\
                                   www.blackhillsinfosec.com

                      [recon-ng v4.9.2, Tim Tomes (@LaNMaSteR53)]

[77] Recon modules
[8]  Reporting modules
[2]  Import modules
[2]  Exploitation modules
[2]  Discovery modules

[recon-ng][default] > show modules
```



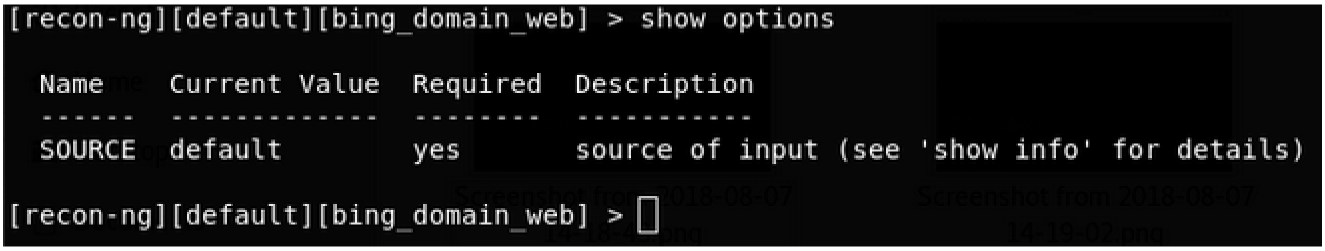
```
 recon/contacts-profiles/fullcontact
 recon/credentials-credentials/adobe
 recon/credentials-credentials/bozocrack
 recon/credentials-credentials/hashes_org
 recon/domains-contacts/metacrawler
 recon/domains-contacts/pgp_search
 recon/domains-contacts/whois_pocs
 recon/domains-credentials/pwnedlist/account_creds
 recon/domains-credentials/pwnedlist/api_usage
 recon/domains-credentials/pwnedlist/domain_creds
 recon/domains-credentials/pwnedlist/domain_ispwned
 recon/domains-credentials/pwnedlist/leak_lookup
 recon/domains-credentials/pwnedlist/leaks_dump
 recon/domains-domains/brute_suffix
 recon/domains-hosts/bing_domain_api
 recon/domains-hosts/bing_domain_web
 recon/domains-hosts/brute_hosts
 recon/domains-hosts/builtwith
 recon/domains-hosts/certificate_transparency
 recon/domains-hosts/google_site_api
 recon/domains-hosts/google_site_web
```

To use a module, Execute the following command



```
[recon-ng][default] > use recon/domains-hosts/bing_domain_web
```

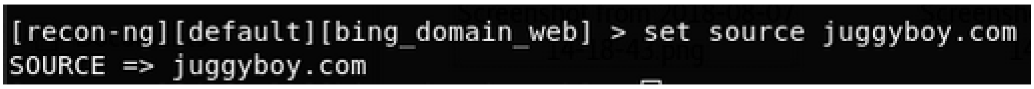
Execute the ***show options*** command, to view the list of options.



```
[recon-ng][default][bing_domain_web] > show options

  Name    Current Value  Required  Description
  ------  -------------  --------  -----------
  SOURCE  default        yes       source of input (see 'show info' for details)

[recon-ng][default][bing_domain_web] > 
```

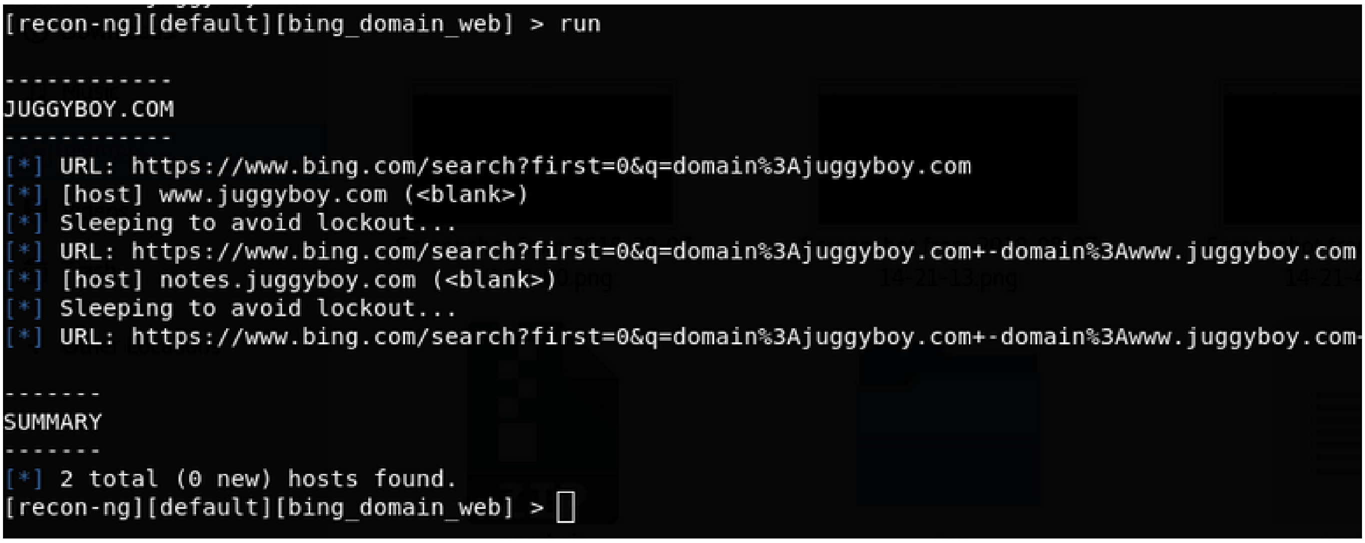
Execute ***set SOURCE <domain name>*** command, to set the domain address as a source

Example: ***set SOURCE juggyboy.com***



```
[recon-ng][default][bing_domain_web] > set source juggyboy.com
SOURCE => juggyboy.com
```

Execute the ***run*** command, to start the search for domains

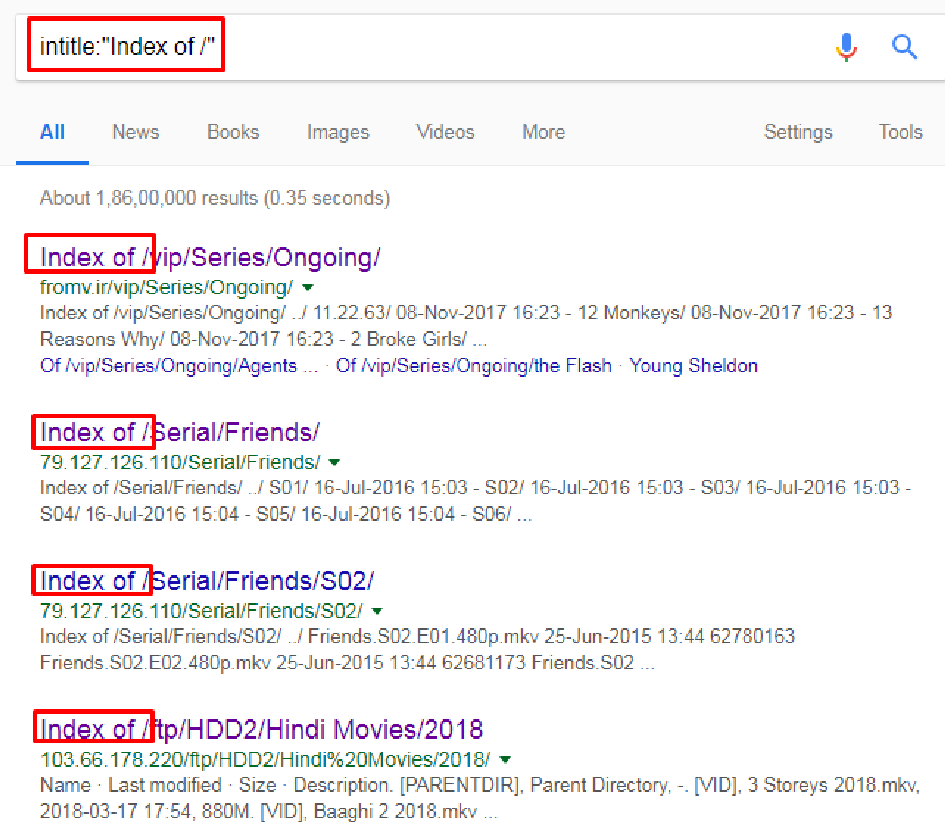


```
[recon-ng][default][bing_domain_web] > run

------------
JUGGYBOY.COM
------------
[*] URL: https://www.bing.com/search?first=0&q=domain%3Ajuggyboy.com
[*] [host] www.juggyboy.com (<blank>)
[*] Sleeping to avoid lockout...
[*] URL: https://www.bing.com/search?first=0&q=domain%3Ajuggyboy.com+-domain%3Awww.juggyboy.com
[*] [host] notes.juggyboy.com (<blank>)
[*] Sleeping to avoid lockout...
[*] URL: https://www.bing.com/search?first=0&q=domain%3Ajuggyboy.com+-domain%3Awww.juggyboy.com-

-------
SUMMARY
-------
[*] 2 total (0 new) hosts found.
[recon-ng][default][bing_domain_web] > 
```

Practical 5: Google Dorks

Google dorks are used to retrieving web pages that contain a specific term.

1. If you search for ***intitle:"Index of/"*** on google search bar, it will display those pages that contain the term "Index of/" in the title of the website.



intitle:"Index of /"

About 1,86,00,000 results (0.35 seconds)

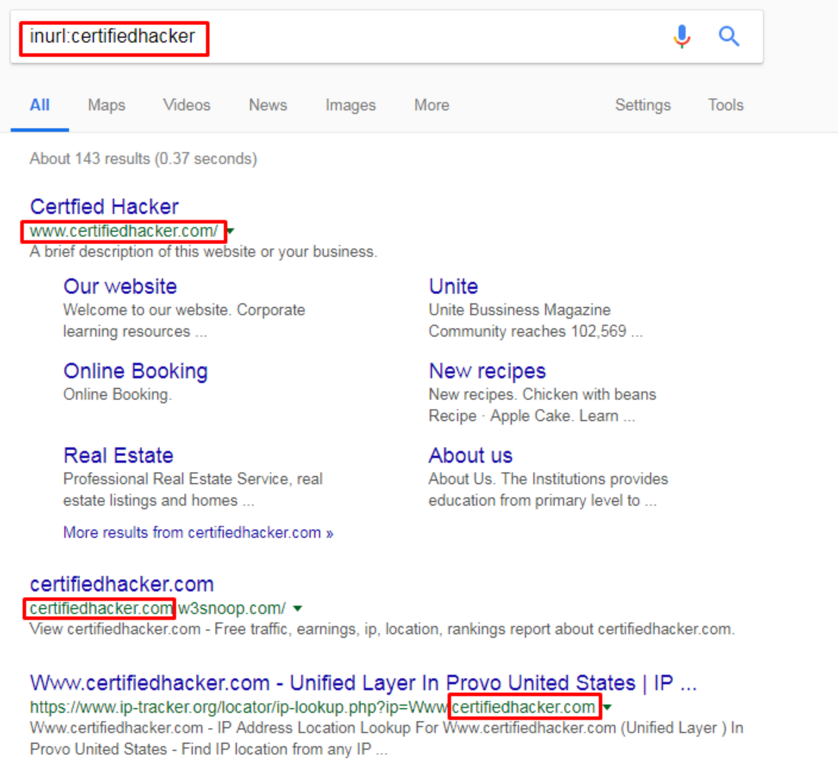
Index of /vip/Series/Ongoing/
fromv.ir/vip/Series/Ongoing/
Index of /vip/Series/Ongoing/ ../ 11.22.63/ 08-Nov-2017 16:23 - 12 Monkeys/ 08-Nov-2017 16:23 - 13 Reasons Why/ 08-Nov-2017 16:23 - 2 Broke Girls/ ...
Of /vip/Series/Ongoing/Agents ... · Of /vip/Series/Ongoing/the Flash · Young Sheldon

Index of /Serial/Friends/
79.127.126.110/Serial/Friends/
Index of /Serial/Friends/ ../ S01/ 16-Jul-2016 15:03 - S02/ 16-Jul-2016 15:03 - S03/ 16-Jul-2016 15:03 - S04/ 16-Jul-2016 15:04 - S05/ 16-Jul-2016 15:04 - S06/ ...

Index of /Serial/Friends/S02/
79.127.126.110/Serial/Friends/S02/
Index of /Serial/Friends/S02/ ../ Friends.S02.E01.480p.mkv 25-Jun-2015 13:44 62780163 Friends.S02.E02.480p.mkv 25-Jun-2015 13:44 62681173 Friends.S02 ...

Index of /ftp/HDD2/Hindi Movies/2018
103.66.178.220/ftp/HDD2/Hindi%20Movies/2018/
Name · Last modified · Size · Description. [PARENTDIR], Parent Directory, -. [VID], 3 Storeys 2018.mkv, 2018-03-17 17:54, 880M. [VID], Baaghi 2 2018.mkv ...

2. ***inurl: certifiedhacker*** will result in displaying those pages that contain the term "certifiedhacker" in the URL.



inurl:certifiedhacker

About 143 results (0.37 seconds)

Certfied Hacker
www.certifiedhacker.com/
A brief description of this website or your business.

Our website
Welcome to our website. Corporate learning resources ...

Unite
Unite Bussiness Magazine Community reaches 102,569 ...

Online Booking
Online Booking.

New recipes
New recipes. Chicken with beans Recipe · Apple Cake. Learn ...

Real Estate
Professional Real Estate Service, real estate listings and homes ...

About us
About Us. The Institutions provides education from primary level to ...

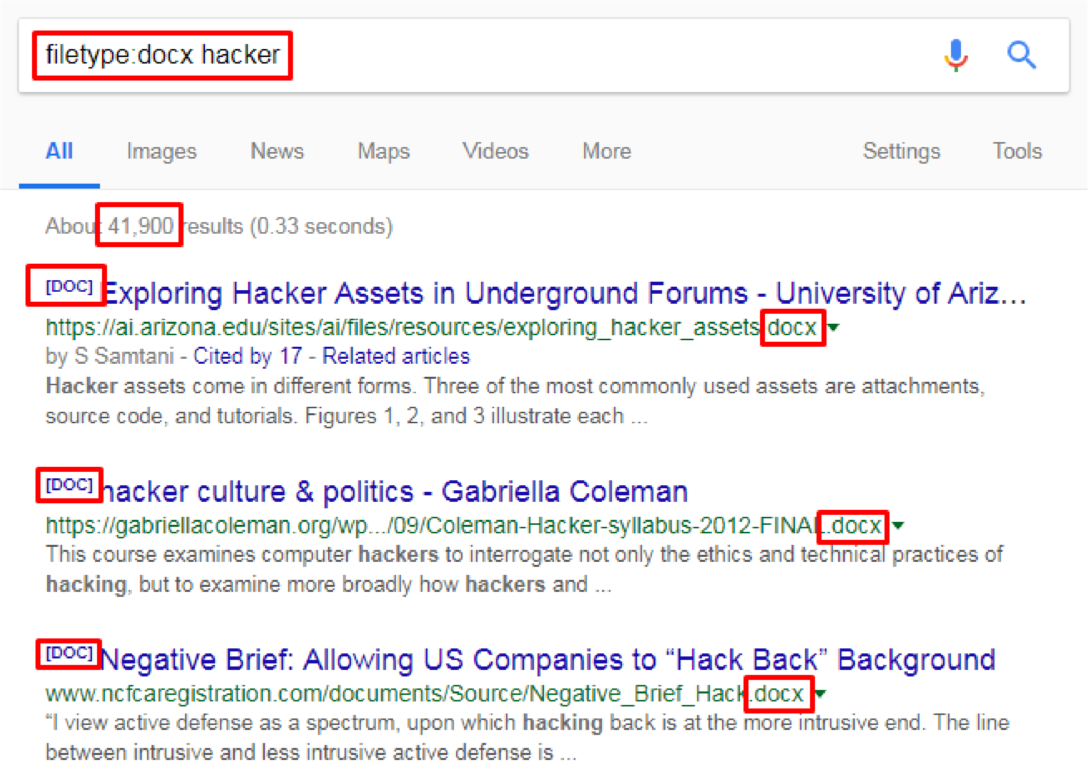
More results from certifiedhacker.com »

certifiedhacker.com
certifiedhacker.com.w3snoop.com/
View certifiedhacker.com - Free traffic, earnings, ip, location, rankings report about certifiedhacker.com.

Www.certifiedhacker.com - Unified Layer In Provo United States | IP ...
https://www.ip-tracker.org/locator/ip-lookup.php?ip=Www.certifiedhacker.com
Www.certifiedhacker.com - IP Address Location Lookup For Www.certifiedhacker.com (Unified Layer) In Provo United States - Find IP location from any IP ...

3. To find out files of a specific format, we can use ***filetype:*** followed by file type (pdf, docx, xlsx) and keyword.

   For example, ***filetype:docx hacker*** will display all word documents that contain word hacker.



filetype:docx hacker

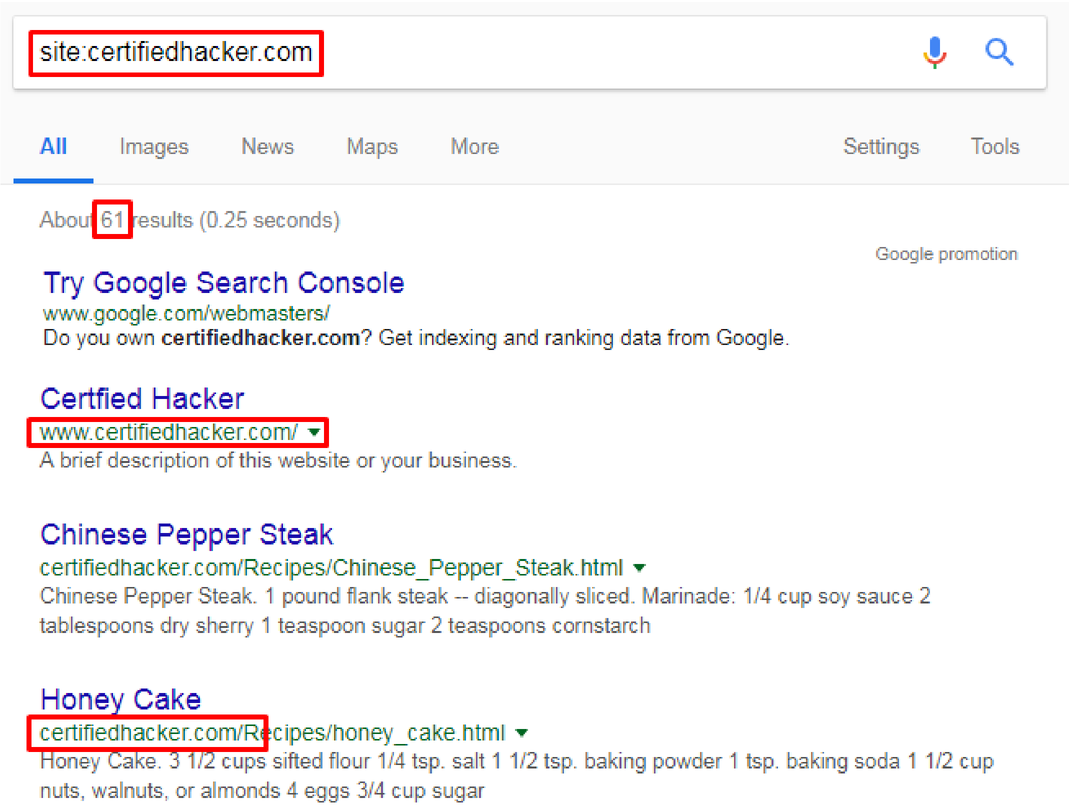
About 41,900 results (0.33 seconds)

[DOC] Exploring Hacker Assets in Underground Forums - University of Ariz...
https://ai.arizona.edu/sites/ai/files/resources/exploring_hacker_assets.docx
by S Samtani - Cited by 17 - Related articles
Hacker assets come in different forms. Three of the most commonly used assets are attachments, source code, and tutorials. Figures 1, 2, and 3 illustrate each ...

[DOC] hacker culture & politics - Gabriella Coleman
https://gabriellacoleman.org/wp.../09/Coleman-Hacker-syllabus-2012-FINAL.docx
This course examines computer **hackers** to interrogate not only the ethics and technical practices of **hacking**, but to examine more broadly how **hackers** and ...

[DOC] Negative Brief: Allowing US Companies to "Hack Back" Background
www.ncfcaregistration.com/documents/Source/Negative_Brief_Hack.docx
"I view active defense as a spectrum, upon which **hacking** back is at the more intrusive end. The line between intrusive and less intrusive active defense is ...

4. ***site: certifiedhacker.com*** will display the results that contain the term "certifiedhacker" in the website URL.



site:certifiedhacker.com

About 61 results (0.25 seconds)

Google promotion

Try Google Search Console
www.google.com/webmasters/
Do you own **certifiedhacker.com**? Get indexing and ranking data from Google.

Certfied Hacker
www.certifiedhacker.com/
A brief description of this website or your business.

Chinese Pepper Steak
certifiedhacker.com/Recipes/Chinese_Pepper_Steak.html
Chinese Pepper Steak. 1 pound flank steak -- diagonally sliced. Marinade: 1/4 cup soy sauce 2 tablespoons dry sherry 1 teaspoon sugar 2 teaspoons cornstarch

Honey Cake
certifiedhacker.com/Recipes/honey_cake.html
Honey Cake. 3 1/2 cups sifted flour 1/4 tsp. salt 1 1/2 tsp. baking powder 1 tsp. baking soda 1 1/2 cup nuts, walnuts, or almonds 4 eggs 3/4 cup sugar

5. ***allintitle: trojan definition*** will return results that contain words trojan and definition in web page titles.

Refer following web pages for advanced Google operators

http://www.googleguide.com/advanced_operators_reference.html

http://www.exploit-db.com