CHAPTER

9 Deepweb: Exploring the Darkest Corners of the Internet

INFORMATION IN THIS CHAPTER

- Clearweb
- Darkweb
- Deepweb
- Why to use it
- Why not to use it
- Deepweb: Tor, I2P, Freenet

INTRODUCTION

In this chapter we will start from where we left in the previous one. We learned about various tools and techniques related to how to stay anonymous online and also discussed about some of the ways in which people still get caught. Here we will deal with the terms like darknet and deepweb and understand some of the fundamental differences.

One of the most efficient ways discussed to stay anonymous was connecting to the anonymous networks like Tor and I2P. We will take this topic further and see what else we can do with it and how it relates to the topic of interest for this chapter.

Until recent past terms like darknet and deepweb were not too popular. They were mostly a topic of interest for people who want to stay anonymous and related to IT (especially information security). Recently there has been some news stories related to these topics, which have made people interested in them and understanding what they are, how they operate, what to expect there, etc. We will cover all those things here and see if there is anything of interest for us.

Before going any further with the technical details, let's understand the basic definitions of the terms we will be dealing with in this chapter

CLEARWEB

We have already discussed in previous chapters about how the search engines work. Simply stated, it works by following the links on a web page and then on the next one

Hacking Web Intelligence. http://dx.doi.org/10.1016/B978-0-12-801867-5.00009-4

and so on. So the part of the web which can be accessed by a search engine is called clearweb. What this means is that anything that we get as a result of a search engine query is part of the clearweb.

DARKWEB

As a user we have clicked on different links on a webpage, but that is not the only way we interact with a website. Sometimes we have to submit some text to get the desired page (e.g., search box), sometimes we have to authenticate before accessing a specific page (e.g., social network website login), sometimes there are things like CAPTCHA which need to be entered before moving further.

So apart from the web that is accessed by search engines there is still a huge amount of data that exists in pages not touched by web spiders/crawlers. This part of the web is known as darkweb or darknet.

DEEPWEB

Now we have a clear separation of the web into two parts, clearweb and darkweb, based upon their accessibility to the search engine. Now we will move a little deeper.

The darkweb comprises of a huge part of the overall web. Inside this darkweb there exists another section which is called as deepweb. This deepweb is also not accessible to the search engines but it also cannot be accessed directly by standard browsers we daily use. This portion of the web is hidden deep inside the web and requires special applications and configurations to be accessed and hence is called deepweb.

Now we have a clear understanding of what is darkweb and deepweb. We are well aware of how to access the regular darkweb and do it on a regular basis. Pages like social media profile which require login, search result page in a website, pages generated dynamically are some of the examples. However if we need to access the deepweb, we need to make special arrangements. Before getting into those details let's understand a bit more about the deepweb.

As stated earlier deepweb is a part of darkweb. Now the question arises that how come it exists inside darkweb but is still not directly accessible. The answer is that because it exists in the form of a network inside the internet, which in itself is a huge network, which means is that darkweb is created as a part of the internet but to access this specific network we need to have the right tools so that a connection could be made to it. Once we have the means to connect to it we can access it.

In this fancy land of deepweb we can find all sorts of things like illegal drugs, weapons, art, and all sorts of black market things. On the other hand it is also used by people to speak freely, exchange ideas, etc.

WHY TO USE IT?

If we are whistleblower, cyber investigator, cyber journalist, government intelligence agent, cyberspace researcher then this is the place for us. This will help us understand how the underground cyberspace works. It will give us ideas about the private days, targets, and attack pattern of cyber-crime, etc. It will help us predict the next attack pattern by understanding the underground community mind-set through the technology they use most frequently.

It also provides freedom of speech, so if you want to protest for a good cause this is the place for you. For investigation of a cyber-crime this can be a popular place. As most of the underground community works here there is a chance of getting ample amount of proof from this place. This can be also used to keep track of online activities of a person or group.

There are dedicated services for optimized use of deepweb such as secure file uploading facilities where activists or whistleblowers can anonymously upload documents. There are services related to people spreading a word that other should know, sharing what's happening all around them, etc. There are online forums to discuss technology, politics, and much more; so if we have these kind of specific requirements or similar then we can use deepweb.

WHY NOT TO USE IT?

Apart from utilizing this space for ethical motives some people also use it to perform many illegal activities. There are many places in this area where we can find people selling drugs, fake ids, money laundering, hackers for hire, etc. Some websites even say that they provide assassins for hire. Apart from this it might also contain websites which provide many disturbing things. One must be very careful while accessing or downloading any content from such places at it might be illegal to access or have it on our computers.

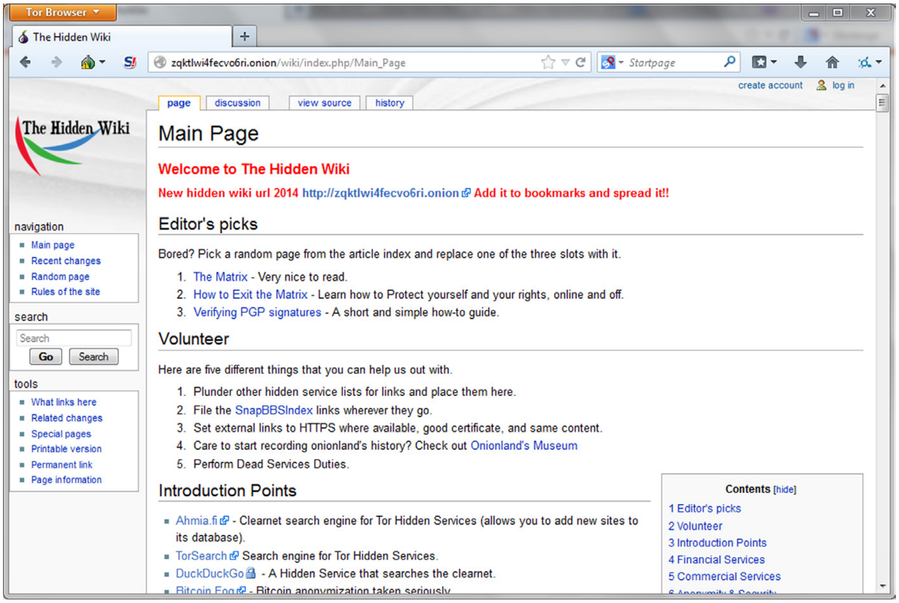
DARKNET SERVICES

TOR

One of the most popular portion of the deepweb is the *.onion domains. In the last chapter we learned about Tor, how it works and also how to use to stay anonymous. The same Tor also allows us to create and access one of the largest portions of the deepweb. We are already aware about how to use Tor browser bundle to access the regular web, now that same tool can be used to access places which are not directly touched.

We simply need to download the Tor browser bundle, extract it, and run the Tor browser. Once the connection to the Tor network is made we are good to go. Apart from accessing the regular websites Tor allows to create and access *.onion websites. These websites if tried to access through a regular browser without Tor configured, will simply display a "The Webpage is not available" message, some kind of error or redirect message; whereas will open up like a regular website through the Tor browser or a browser configured to access the internet through Tor as a proxy.

Let's start exploring these Tor-based domains. One of the most common places to start with is "The Hidden Wiki." The address of this wiki is http://zqktlwi4fecvo6ri.onion/wiki/index.php/Main_Page. Notice that this URL does not contain a .com, .net, .org, or other familiar domain names, but is .onion. Firstly try to open this URL into a regular browser, does it open up? Now open this URL into our Tor browser. We will get a webpage which contains a wiki page with a huge list of other .onion domains divided category wise. The categories listed are financial services, anonymity and security, whistleblowing, P2P file sharing, etc. We can explore this wiki further and check out some of the interesting links listed in it.



Main Page

Welcome to The Hidden Wiki

New hidden wiki url 2014 http://zqktlwi4fecvo6ri.onion Add it to bookmarks and spread it!!

Editor's picks

Bored? Pick a random page from the article index and replace one of the three slots with it.

1. The Matrix - Very nice to read.
2. How to Exit the Matrix - Learn how to Protect yourself and your rights, online and off.
3. Verifying PGP signatures - A short and simple how-to guide.

Volunteer

Here are five different things that you can help us out with.

1. Plunder other hidden service lists for links and place them here.
2. File the SnapBBSIndex links wherever they go.
3. Set external links to HTTPS where available, good certificate, and same content.
4. Care to start recording onionland's history? Check out Onionland's Museum
5. Perform Dead Services Duties.

Introduction Points

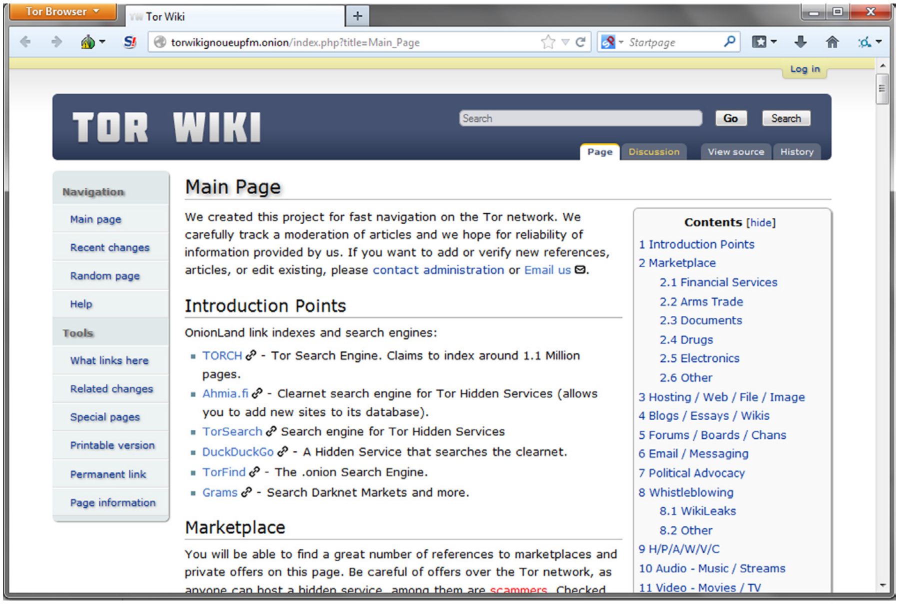
- Ahmia.fi - Clearnet search engine for Tor Hidden Services (allows you to add new sites to its database).
- TorSearch Search engine for Tor Hidden Services.
- DuckDuckGo - A Hidden Service that searches the clearnet.
- Bitcoin Fog - Bitcoin anonymization taken seriously.

Contents [hide]
1 Editor's picks
2 Volunteer
3 Introduction Points
4 Financial Services
5 Commercial Services

FIGURE 9.1

The Hidden Wiki.

Similarly there is another wiki, 'Tor Wiki' which lists a huge list of .onion domains. It also contains various categories in a neater way. This wiki makes it easier to explore the listed domains by marking them as verified, caution, or scam.



Main Page

We created this project for fast navigation on the Tor network. We carefully track a moderation of articles and we hope for reliability of information provided by us. If you want to add or verify new references, articles, or edit existing, please contact administration or Email us.

Introduction Points

OnionLand link indexes and search engines:

- TORCH - Tor Search Engine. Claims to index around 1.1 Million pages.
- Ahmia.fi - Clearnet search engine for Tor Hidden Services (allows you to add new sites to its database).
- TorSearch Search engine for Tor Hidden Services
- DuckDuckGo - A Hidden Service that searches the clearnet.
- TorFind - The .onion Search Engine.
- Grams - Search Darknet Markets and more.

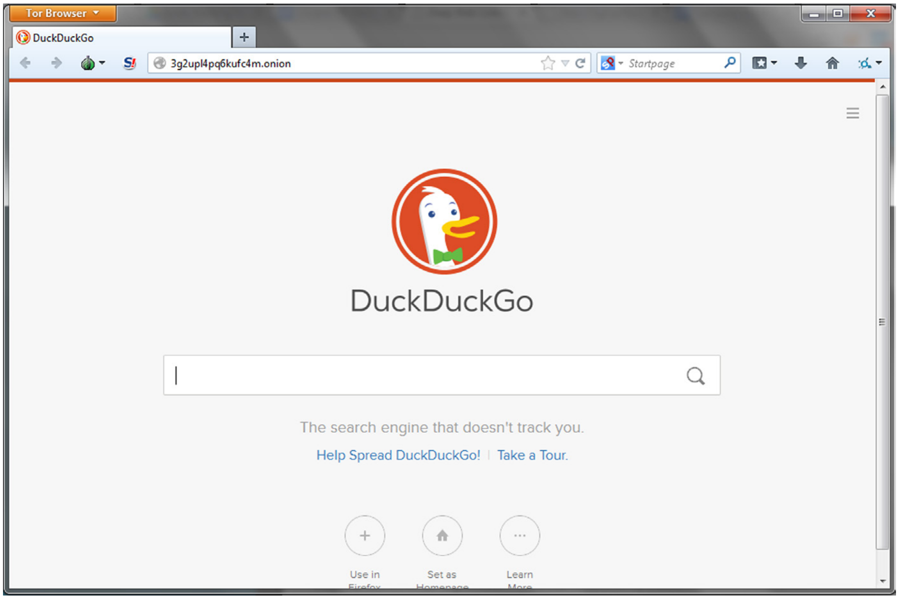
Marketplace

You will be able to find a great number of references to marketplaces and private offers on this page. Be careful of offers over the Tor network, as anyone can host a hidden service, among them are scammers. Checked

FIGURE 9.2

TOR Wiki.

The search engine DuckDuckGo that we discussed in a previous chapter, also has a .onion address, http://3g2upl4pq6kufc4m.onion/. Using this we can search the clearweb from a Tor domain.



The search engine that doesn't track you.

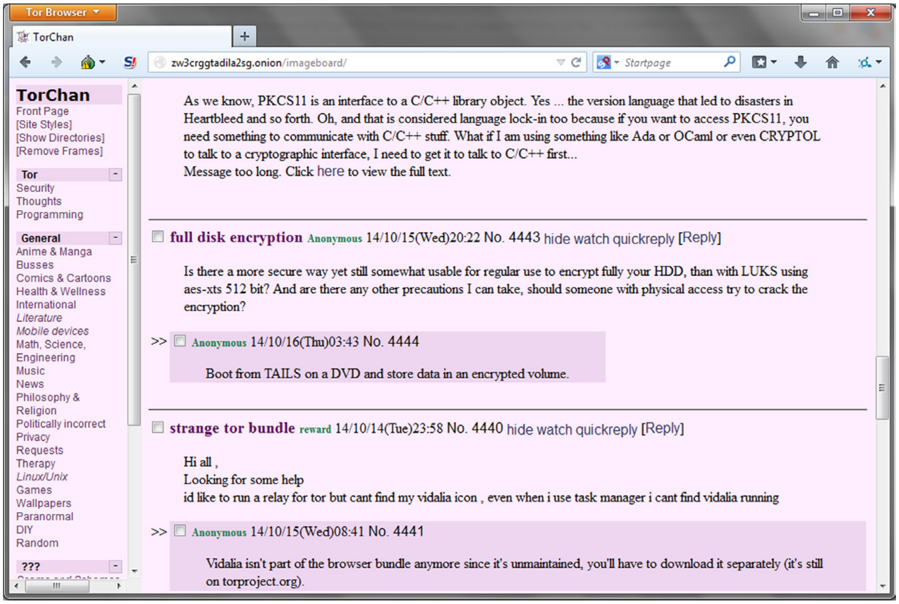
Help Spread DuckDuckGo! | Take a Tour.

FIGURE 9.3

DuckDuckGo Search Engine (.onion domain).

There are also some search engines such as TORCH http://xmh57jrzrnw6insl.onion/ available to search the deepweb, but they seldom work properly.

As we can see in the wikis list there are various market places which sell illegal drugs. One of the most popular one was called as "Silk Road'" which was recently brought down by FBI, but a new one has come up to take its place and is called "Silk Road 2.0." Similarly there are many other places which claim to have illegal items, as well as various forums, boards, internet relay chats (IRCs) and other places which provide like-minded people a platform to discuss and learn things. One such board is Torchan http://zw3crggtadila2sg.onion/imageboard/. There are various different topics such as programming, literature, privacy etc., on which people discuss their views.



As we know, PKCS11 is an interface to a C/C++ library object. Yes ... the version language that led to disasters in Heartbleed and so forth. Oh, and that is considered language lock-in too because if you want to access PKCS11, you need something to communicate with C/C++ stuff. What if I am using something like Ada or OCaml or even CRYPTOL to talk to a cryptographic interface, I need to get it to talk to C/C++ first...
Message too long. Click here to view the full text.

□ **full disk encryption** Anonymous 14/10/15(Wed)20:22 No. 4443 hide watch quickreply [Reply]

Is there a more secure way yet still somewhat usable for regular use to encrypt fully your HDD, than with LUKS using aes-xts 512 bit? And are there any other precautions I can take, should someone with physical access try to crack the encryption?

>> □ Anonymous 14/10/16(Thu)03:43 No. 4444

Boot from TAILS on a DVD and store data in an encrypted volume.

□ **strange tor bundle** reward 14/10/14(Tue)23:58 No. 4440 hide watch quickreply [Reply]

Hi all ,
Looking for some help
id like to run a relay for tor but cant find my vidalia icon , even when i use task manager i cant find vidalia running

>> □ Anonymous 14/10/15(Wed)08:41 No. 4441

Vidalia isn't part of the browser bundle anymore since it's unmaintained, you'll have to download it separately (it's still on torproject.org).

FIGURE 9.4

TorChan.

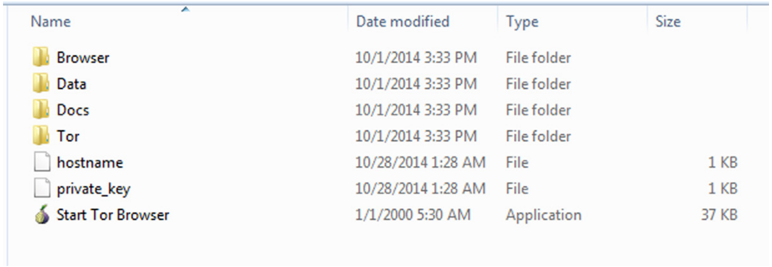
Till now we have seen how to access .onion domain websites, now let's see how to create these. To create a .onion site first we need to have a local web server. XAMPP is one such option which uses Apache as a server. Once the server is installed and configured to host a local website, we need to modify the "torrc" file. This file can be found at the location "Tor Browser\Data\Tor". Open this file in an editor and add the following lines to it:

```
HiddenServiceDir C:\Tor\Tor_Browser\hid
HiddenServicePort 80 127.0.0.1:80
```

The path in front of "HiddenServiceDir" is the path where Tor will create files to store information related to the hidden service we are creating. The part in front of

'HiddenServicePort' contains the port using which the Tor users will think they are using to connect to the service and the next portion is the localhost with the port at which the service is actually running locally.

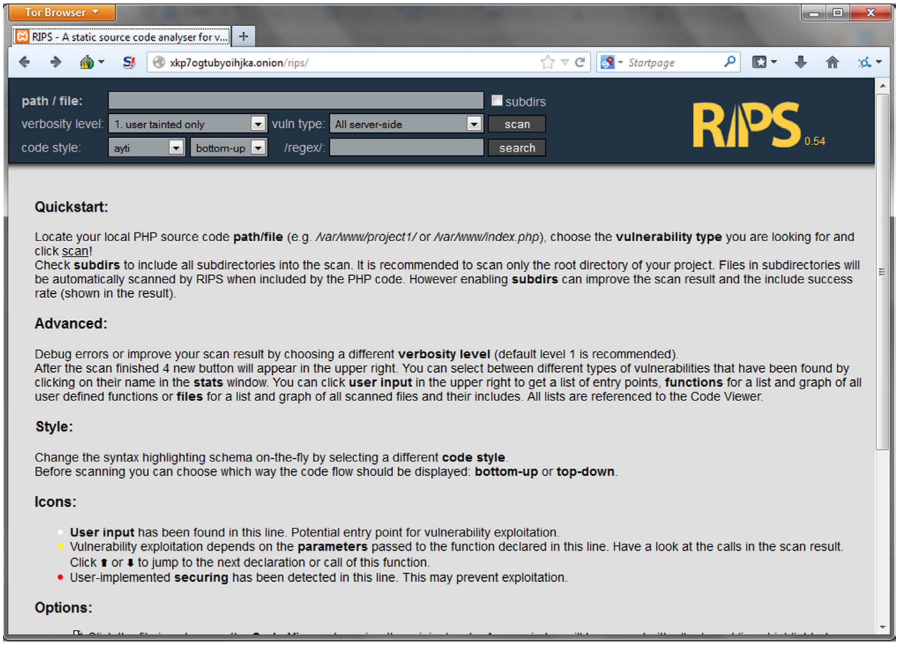
Once this information has been added to the file simply save it and restart Tor. Once it starts, two files will be created in the above mentioned folder: hostname and private_key. The file hostname contains the name which can be used to access our webpage through Tor, under a .onion domain. The content of the file private_key must be kept secret so that no one else can impersonate our service.



Name	Date modified	Type	Size
Browser	10/1/2014 3:33 PM	File folder	
Data	10/1/2014 3:33 PM	File folder	
Docs	10/1/2014 3:33 PM	File folder	
Tor	10/1/2014 3:33 PM	File folder	
hostname	10/28/2014 1:28 AM	File	1 KB
private_key	10/28/2014 1:28 AM	File	1 KB
Start Tor Browser	1/1/2000 5:30 AM	Application	37 KB

FIGURE 9.5

Files created.



Tor Browser
RIPS - A static source code analyser for v...
xkp7ogtubyoihjka.onion/rips/
Startpage

path / file: □ subdirs

verbosity level: 1. user tainted only vuln type: All server-side scan

code style: ayti bottom-up /regex/: search

Quickstart:

Locate your local PHP source code **path/file** (e.g. */var/www/project1/* or */var/www/index.php*), choose the **vulnerability type** you are looking for and click scan!
Check **subdirs** to include all subdirectories into the scan. It is recommended to scan only the root directory of your project. Files in subdirectories will be automatically scanned by RIPS when included by the PHP code. However enabling **subdirs** can improve the scan result and the include success rate (shown in the result).

Advanced:

Debug errors or improve your scan result by choosing a different **verbosity level** (default level 1 is recommended).
After the scan finished 4 new button will appear in the upper right. You can select between different types of vulnerabilities that have been found by clicking on their name in the **stats** window. You can click **user input** in the upper right to get a list of entry points, **functions** for a list and graph of all user defined functions or **files** for a list and graph of all scanned files and their includes. All lists are referenced to the Code Viewer.

Style:

Change the syntax highlighting schema on-the-fly by selecting a different **code style**.
Before scanning you can choose which way the code flow should be displayed: **bottom-up** or **top-down**.

Icons:

- **User input** has been found in this line. Potential entry point for vulnerability exploitation.
- Vulnerability exploitation depends on the **parameters** passed to the function declared in this line. Have a look at the calls in the scan result.
  Click ⬆ or ⬇ to jump to the next declaration or call of this function.
- User-implemented **securing** has been detected in this line. This may prevent exploitation.

Options:

FIGURE 9.6

TOR hidden service.

We have seen how to create a Tor hidden service, but for it to be safe and anonymous we need to take various steps as followed:

- Configure the server to not leak any information (e.g., Server Banner, error messages).
- Do not run any service on that machine which might make it vulnerable to any attack, or might reveal the identity.
- Check the security of the web application hosted.

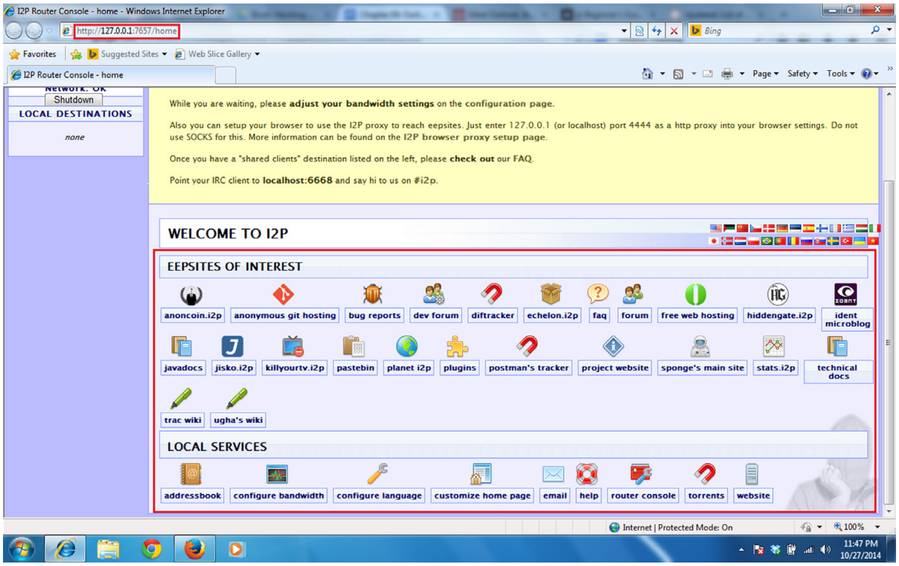
Tor also allows us to run hidden service through relays but it is not advised. Relays are nodes which take part in transferring the traffic of the tor network and act as routers for it. Relays are of different kinds: middle relays—which are starting and middle nodes in the packet transfer chain; exit relays—which are the final node in the chain and connect directly to the receiver; bridges—which are the relays that are not publicly listed as tor relays. Bridges are helpful when we are connecting to the internet through a monitored/managed network (e.g., college network) as it would make it difficult to identify if the user is connected to Tor using that network. These applications to run these services can be downloaded from the page https://www.torproject.org/download/download.html.en

I2P

Like Tor we also learned how to be anonymous using I2P. Now in this chapter we will not focus on the anonymity part again but will focus on how I2P will help us to access/create deepweb.

Though we will find number of places where we will get lots of market places of hidden services related to I2P or can be accessible by I2P and in most places sites will claim the authenticity of the services provided, it's better to cross check manually before using or accessing any of them to avoid unknown consequences.

We already know how to install I2P, as we learned the same in the last chapter but for a quick reference we can easily download and install it from the following URL: https://geti2p.net/en/download (here we can get bundle for Windows, Mac, different Linux version, and also for android). Download the bundle according to your device and operating system and install. After installation once you open I2P, it will open in localhost (http://127.0.0.1:7657/home) or else as we learned in last chapter we need to manually type this web address in the address bars of the browser. After opening the same in browser once we get Network OK in left top corner of the page, configure the browser proxy settings to 127.0.0.1:4444 to access all the sites. And for IRC we can use localhost:6668 in our IRC client and can use #i2p for chat. After changing the browser proxy setting we will able to visit the eepsite sites with *.i2p extension.



I2P Router Console - home - Windows Internet Explorer
http://127.0.0.1:7657/home
Favorites
Suggested Sites
Web Slice Gallery
I2P Router Console - home
Page
Safety
Tools
Network: OK
Shutdown
LOCAL DESTINATIONS
none

While you are waiting, please **adjust your bandwidth settings** on the configuration page.

Also you can setup your browser to use the I2P proxy to reach eepsites. Just enter 127.0.0.1 (or localhost) port 4444 as a http proxy into your browser settings. Do not use SOCKS for this. More information can be found on the **I2P browser proxy setup page**.

Once you have a "shared clients" destination listed on the left, please **check out** our FAQ.

Point your IRC client to **localhost:6668** and say hi to us on #i2p.

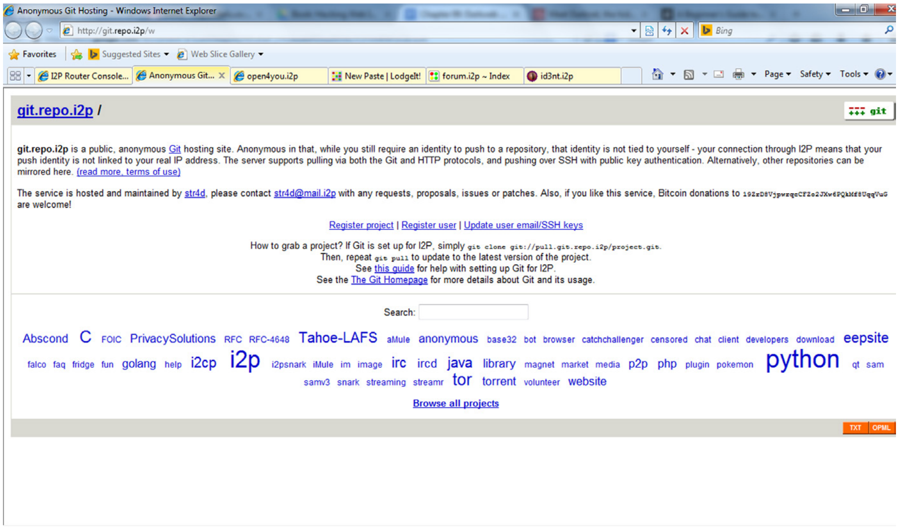
FIGURE 9.7

I2P home.

Some of the sites are listed in the router homepage as shown in the figure.

E.g., Anonymous git hosting: http://git.repo.i2p/

Here though we need to provide some details to push the respiratory, the identity is provided by us will not link to our real IP address, in this way we can use git anonymously.



git.repo.i2p is a public, anonymous Git hosting site. Anonymous in that, while you still require an identity to push to a repository, that identity is not tied to yourself - your connection through I2P means that your push identity is not linked to your real IP address. The server supports pulling via both the Git and HTTP protocols, and pushing over SSH with public key authentication. Alternatively, other repositories can be mirrored here. (read more, terms of use)

The service is hosted and maintained by str4d, please contact str4d@mail.i2p with any requests, proposals, issues or patches. Also, if you like this service, Bitcoin donations to 192rD8VjpwrqeCFZo2JXw6PQkMf8UqgVuG are welcome!

Register project | Register user | Update user email/SSH keys

How to grab a project? If Git is set up for I2P, simply `git clone git://pull.git.repo.i2p/project.git`.
Then, repeat `git pull` to update to the latest version of the project.
See this guide for help with setting up Git for I2P.
See the The Git Homepage for more details about Git and its usage.

Search:

Abscond C FOIC PrivacySolutions RFC RFC-4648 Tahoe-LAFS aMule anonymous base32 bot browser catchchallenger censored chat client developers download eepsite
falco faq fridge fun golang help i2cp i2p i2psnark iMule im image irc ircd java library magnet market media p2p php plugin pokemon python qt sam
samv3 snark streaming streamr tor torrent volunteer website
Browse all projects
TXT OPML

FIGURE 9.8

I2P git.

Free web hosting: http://open4you.i2p/

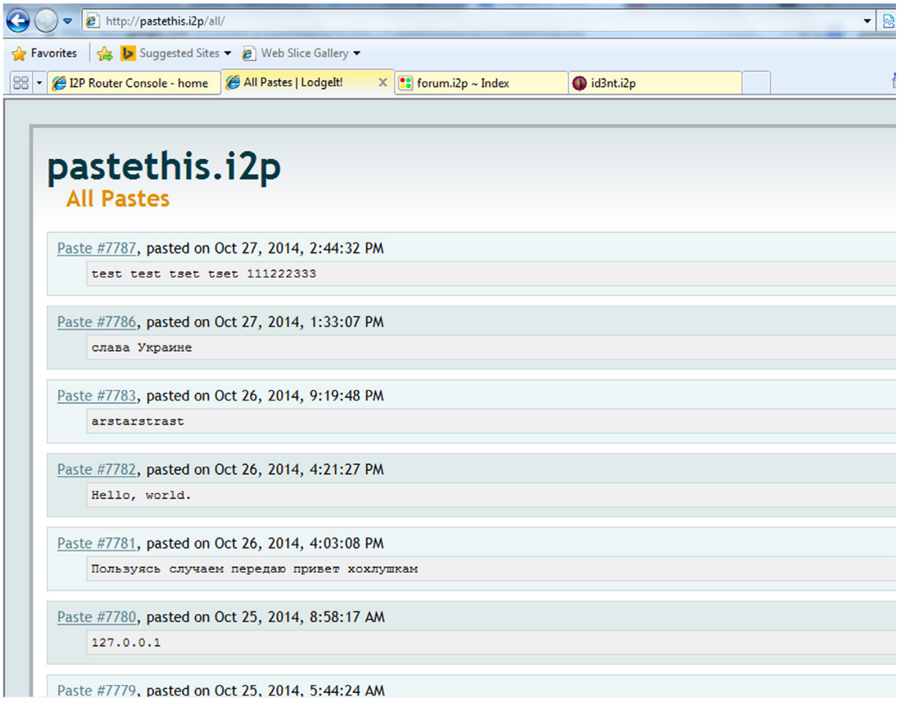
Here we can get details of how to use the free web hosting service. There are other details that can be found in the forum maintained in the following URL: http://open4you.i2p/index.php

If we want to host any kind of website in the deepweb, this can be helpful.

Pastebin: http://pastethis.i2p/

It is a website generally to save text online for a period of time for personal use. But popularly it is used as a source to provide credentials, latest cyber news, deface site details, cyber-attack target details, etc. Though in the normal pastebin we need to provide certain details to paste something, here no details required.

We can also find all the paste details from the following URL: http://pastethis.i2p/all/.



pastethis.i2p

All Pastes

Paste #7787, pasted on Oct 27, 2014, 2:44:32 PM

```
test test tset tset 111222333
```

Paste #7786, pasted on Oct 27, 2014, 1:33:07 PM

```
слава Украине
```

Paste #7783, pasted on Oct 26, 2014, 9:19:48 PM

```
arstarstrast
```

Paste #7782, pasted on Oct 26, 2014, 4:21:27 PM

```
Hello, world.
```

Paste #7781, pasted on Oct 26, 2014, 4:03:08 PM

```
Пользуясь случаем передаю привет хохлушкам
```

Paste #7780, pasted on Oct 25, 2014, 8:58:17 AM

```
127.0.0.1
```

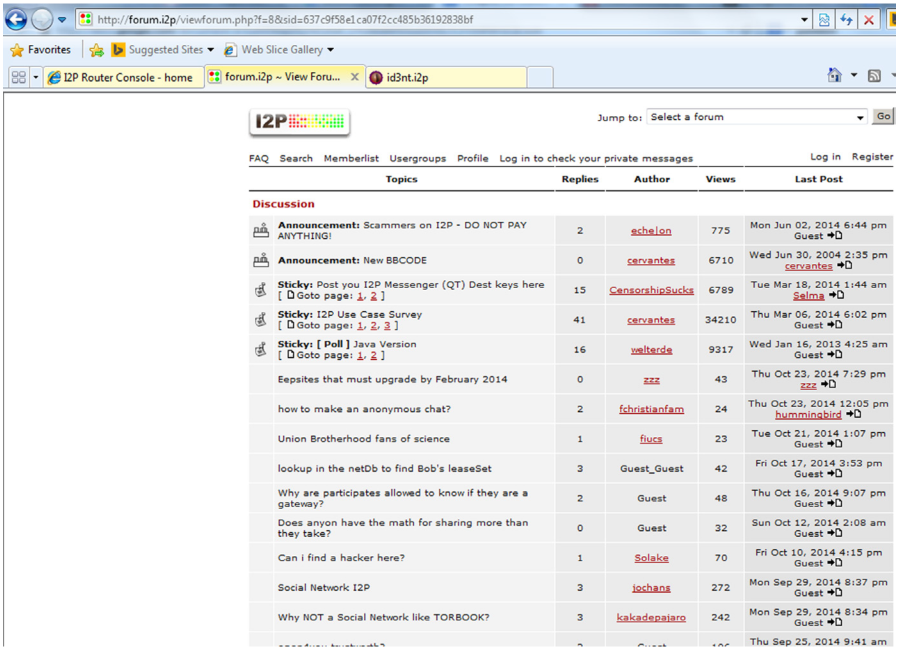
Paste #7779, pasted on Oct 25, 2014, 5:44:24 AM

FIGURE 9.9

I2P based Paste data service.

Forum: http://forum.i2p/

It's like a general forum to discuss different things in different section of threads. The topics may be related to I2P or something else. Depending upon the area of interest take membership, login and read, create or edit posts based on the permissions provided by the site.



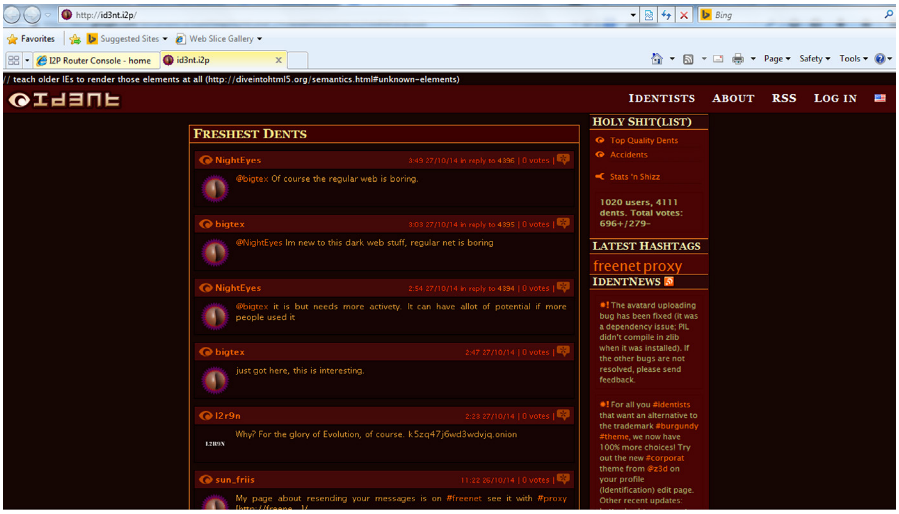
Topics	Replies	Author	Views	Last Post
Discussion				
Announcement: Scammers on I2P - DO NOT PAY ANYTHING!	2	echelon	775	Mon Jun 02, 2014 6:44 pm Guest
Announcement: New BBCODE	0	cervantes	6710	Wed Jun 30, 2004 2:35 pm cervantes
Sticky: Post you I2P Messenger (QT) Dest keys here [Goto page: 1, 2]	15	CensorshipSucks	6789	Tue Mar 18, 2014 1:44 am Selma
Sticky: I2P Use Case Survey [Goto page: 1, 2, 3]	41	cervantes	34210	Thu Mar 06, 2014 6:02 pm Guest
Sticky: [Poll] Java Version [Goto page: 1, 2]	16	welterde	9317	Wed Jan 16, 2013 4:25 am Guest
Eepsites that must upgrade by February 2014	0	zzz	43	Thu Oct 23, 2014 7:29 pm zzz
how to make an anonymous chat?	2	fchristianfam	24	Thu Oct 23, 2014 12:05 pm hummingbird
Union Brotherhood fans of science	1	fiucs	23	Tue Oct 21, 2014 1:07 pm Guest
lookup in the netDb to find Bob's leaseSet	3	Guest_Guest	42	Fri Oct 17, 2014 3:53 pm Guest
Why are participates allowed to know if they are a gateway?	2	Guest	48	Thu Oct 16, 2014 9:07 pm Guest
Does anyon have the math for sharing more than they take?	0	Guest	32	Sun Oct 12, 2014 2:08 am Guest
Can i find a hacker here?	1	Solake	70	Fri Oct 10, 2014 4:15 pm Guest
Social Network I2P	3	jochans	272	Mon Sep 29, 2014 8:37 pm Guest
Why NOT a Social Network like TORBOOK?	3	kakadepajaro	242	Mon Sep 29, 2014 8:34 pm Guest
				Thu Sep 25, 2014 9:41 am

FIGURE 9.10

I2P based forum.

Microblog: http://id3nt.i2p/

Id3nt is a microblogging site like twitter. Here we can post whatever we want, we can share our views, discuss on a particular topic, reply to some post of our interest. It's quite similar to the normal microblogging site.



// teach older IEs to render those elements at all (http://diveintohtml5.org/semantics.html#unknown-elements)

FRESHEST DENTS

NightEyes 3:49 27/10/14 in reply to 4396 | 0 votes |
@bigtex Of course the regular web is boring.

bigtex 3:03 27/10/14 in reply to 4395 | 0 votes |
@NightEyes Im new to this dark web stuff, regular net is boring

NightEyes 2:54 27/10/14 in reply to 4394 | 0 votes |
@bigtex it is but needs more activety. It can have allot of potential if more people used it

bigtex 2:47 27/10/14 | 0 votes |
just got here, this is interesting.

l2r9n 2:23 27/10/14 | 0 votes |
Why? For the glory of Evolution, of course. k5zq47j6wd3wdvjq.onion

sun_friis 11:22 26/10/14 | 0 votes |
My page about resending your messages is on #freenet see it with #proxy

HOLY SHIT(LIST)
- Top Quality Dents
- Accidents
- Stats 'n Shizz

1020 users, 4111 dents. Total votes: 696+/279-

LATEST HASHTAGS

freenet proxy

IDENTNEWS

*! The avatard uploading bug has been fixed (it was a dependency issue; PIL didn't compile in zlib when it was installed). If the other bugs are not resolved, please send feedback.

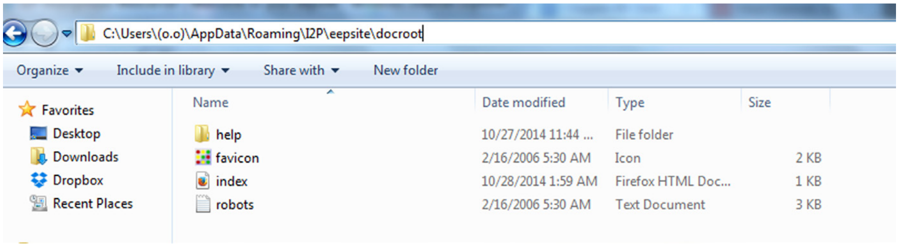
*! For all you #identists that want an alternative to the trademark #burgundy #theme, we now have 100% more choices! Try out the new #corporat theme from @z3d on your profile (Identification) edit page. Other recent updates:

FIGURE 9.11

Id3nt.

How to create own site using I2P:

To create our own anonymous I2P web server we need to edit files from the following path. In case of windows machine the path is %APPDATA%\I2P\eepsite\docroot\ and in case of Linux machine the path is ~/.i2p/eepsite/docroot/.

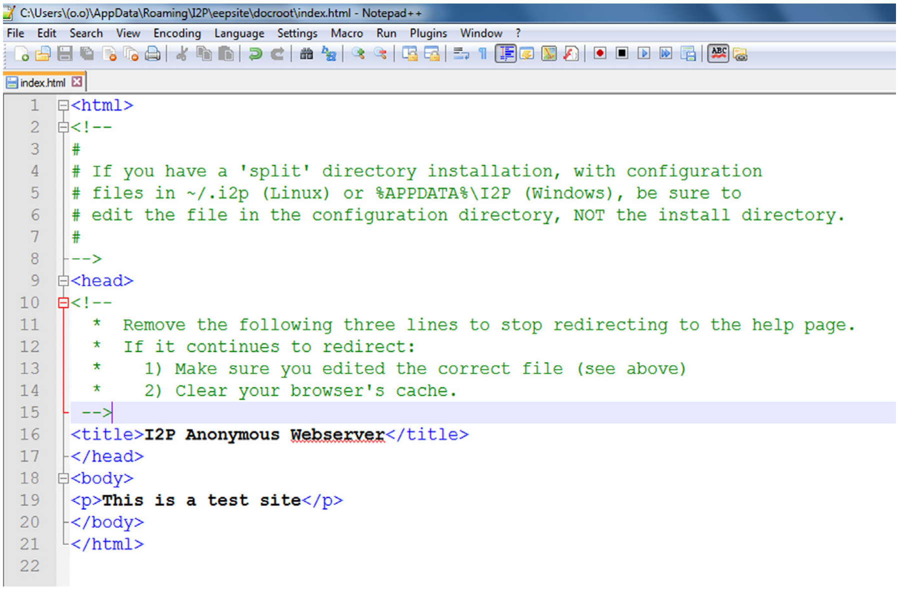


C:\Users\(o.o)\AppData\Roaming\I2P\eepsite\docroot

Name	Date modified	Type	Size
help	10/27/2014 11:44 ...	File folder	
favicon	2/16/2006 5:30 AM	Icon	2 KB
index	10/28/2014 1:59 AM	Firefox HTML Doc...	1 KB
robots	2/16/2006 5:30 AM	Text Document	3 KB

FIGURE 9.12

Eepsite files.



C:\Users\(o.o)\AppData\Roaming\I2P\eepsite\docroot\index.html - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
index.html

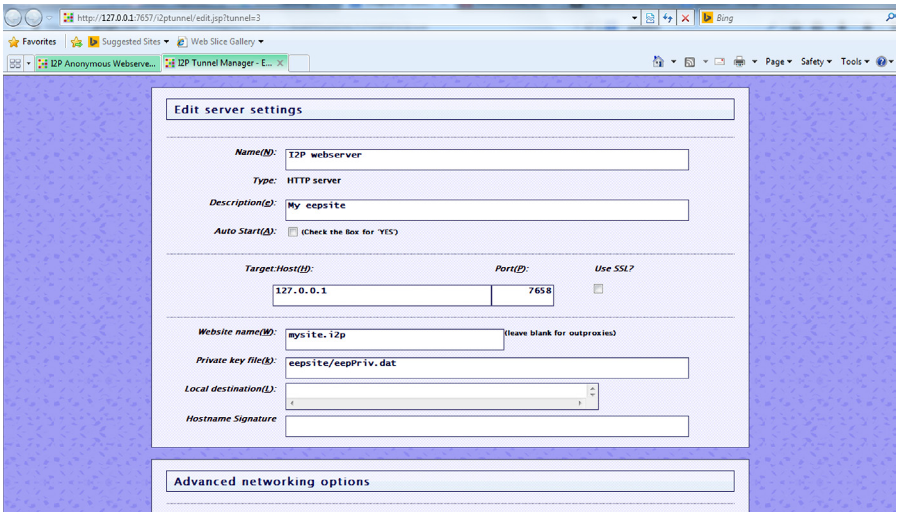
```
<html>
<!--
#
# If you have a 'split' directory installation, with configuration
# files in ~/.i2p (Linux) or %APPDATA%\I2P (Windows), be sure to
# edit the file in the configuration directory, NOT the install directory.
#
-->
<head>
<!--
  *  Remove the following three lines to stop redirecting to the help page.
  *  If it continues to redirect:
  *    1) Make sure you edited the correct file (see above)
  *    2) Clear your browser's cache.
 -->
<title>I2P Anonymous Webserver</title>
</head>
<body>
<p>This is a test site</p>
</body>
</html>

```

FIGURE 9.13

Edit file.

After completing all the edits we need to set up server configuration details from the following URL: http://127.0.0.1:7657/i2ptunnel/edit.jsp?tunnel=3

The options are shown in below figure



http://127.0.0.1:7657/i2ptunnel/edit.jsp?tunnel=3
Bing
Favorites
Suggested Sites
Web Slice Gallery
I2P Anonymous Webserve...
I2P Tunnel Manager - E...
Page
Safety
Tools

Edit server settings

Name(N): I2P webserver

Type: HTTP server

Description(e): My eepsite

Auto Start(A): □ (Check the Box for 'YES')

Target:Host(H): 127.0.0.1

Port(P): 7658

Use SSL? □

Website name(W): mysite.i2p (leave blank for outproxies)

Private key file(k): eepsite/eepPriv.dat

Local destination(L):

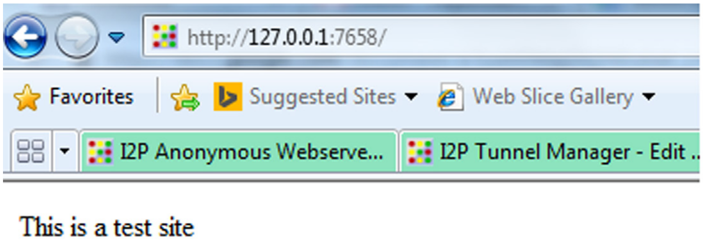
Hostname Signature

Advanced networking options

FIGURE 9.14

Edit server settings.

By default the site created can be accessible locally from the following path http://127.0.0.1:7658.



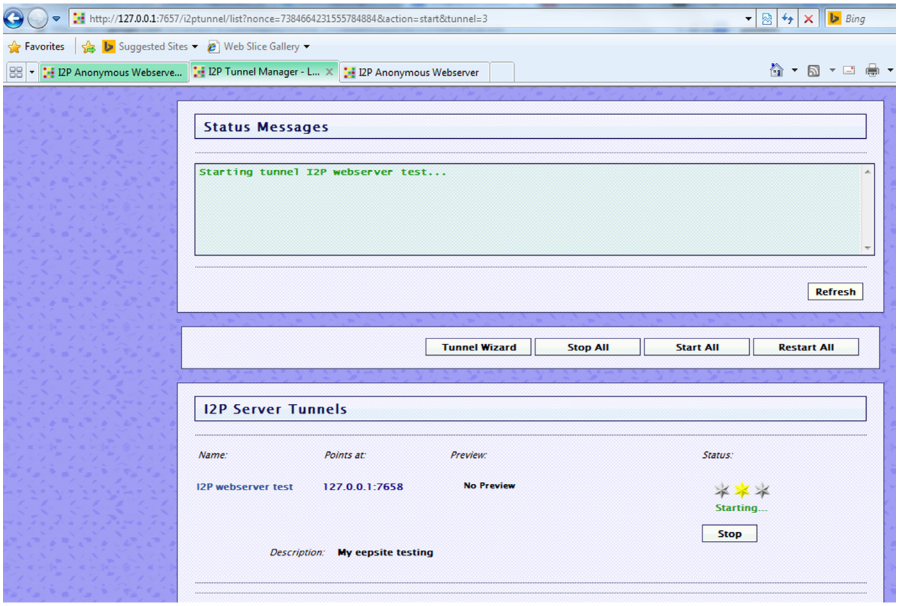
This is a test site

FIGURE 9.15

Local site.

Though we can edit the same from the server settings, additionally we can use setup name, description, protocol, IP and port number, as well as the domain name from the above server edit page. There are certain advance options. But the options are quite straightforward so we can easily configure our web server and anyone can access the same using the provided domain name.

Once completing all the configurations save the details. We will get the page where we need to start the web services we just configured shown in below figure.


http://127.0.0.1:7657/i2ptunnel/list?nonce=7384664231555784884&action=start&tunnel=3
Bing
Favorites
Suggested Sites
Web Slice Gallery
I2P Anonymous Webserve...
I2P Tunnel Manager - L...
I2P Anonymous Webserver
Refresh
Tunnel Wizard
Stop All
Start All
Restart All
Stop

Status Messages

```
Starting tunnel I2P webserver test...
```

I2P Server Tunnels

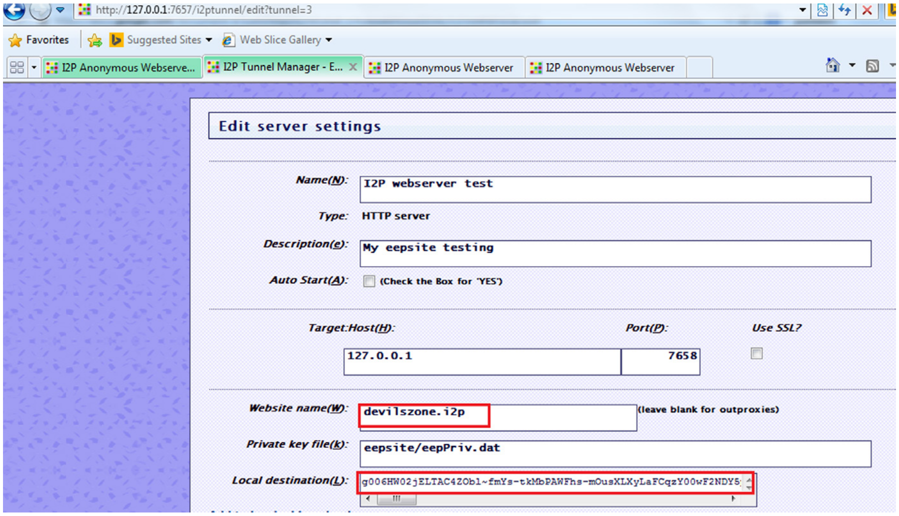
Name:	Points at:	Preview:	Status:
I2P webserver test	127.0.0.1:7658	No Preview	Starting...

Description: My eepsite testing

FIGURE 9.16

Starting the service.

Sometime we need to add the domain name and a long base64 key generated by the page in the router address book to access the site as shown in below image.


http://127.0.0.1:7657/i2ptunnel/edit?tunnel=3
Favorites
Suggested Sites
Web Slice Gallery
I2P Anonymous Webserve...
I2P Tunnel Manager - E...
I2P Anonymous Webserver
I2P Anonymous Webserver

Edit server settings

Name(N): I2P webserver test

Type: HTTP server

Description(e): My eepsite testing

Auto Start(A): □ (Check the Box for 'YES')

Target:Host(H): 127.0.0.1 Port(P): 7658 Use SSL? □

Website name(W): devilszone.i2p (leave blank for outproxies)

Private key file(k): eepsite/eepPriv.dat

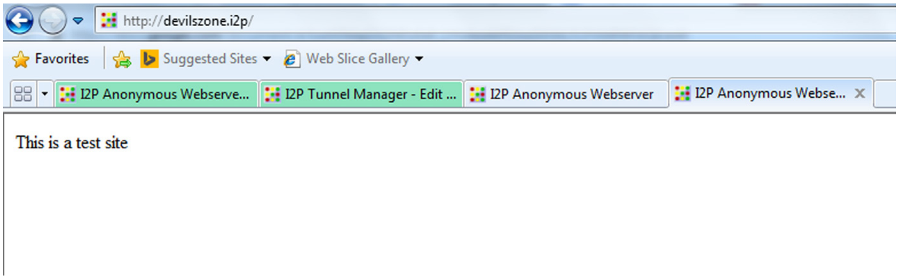
Local destination(L): g006HW02jELTAC4ZObl~fmYs-tkMbPAWFhs-mOusXLXyLaFCqzY00wF2NDY5

FIGURE 9.17

Adding the name.

Now we can access the page by the domain name. In my case as from the above figure it's quite clear that the name is http://devilszone.i2p/.

Here is the figure showing the same using the domain name in the browser.



This is a test site

FIGURE 9.18

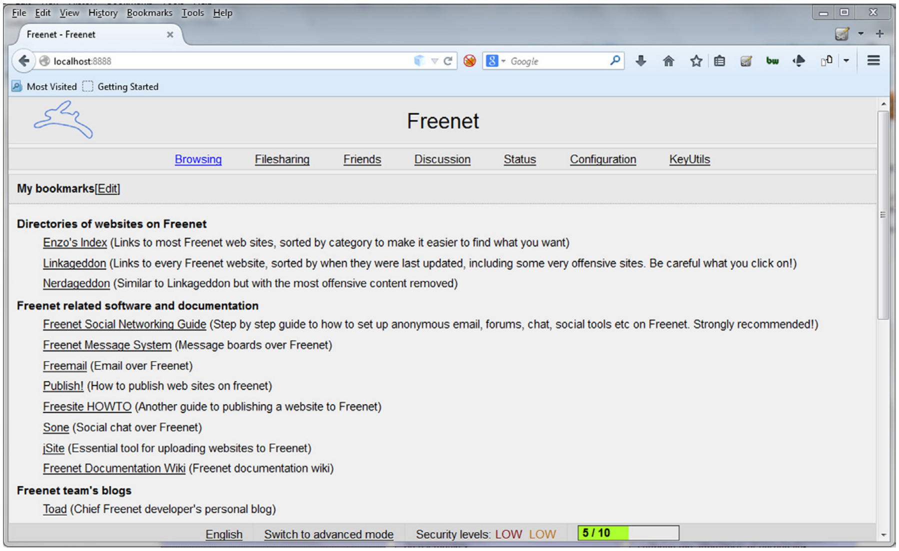
Service running.

Here we learned how to get different internal sites from the internet with *.i2p extension, how to access them using I2P, how to create our own I2P site for providing services. This will help us to understand the deepweb quite easily.

FREENET

Similar to Tor and I2P there is yet another anonymous network, freenet. It is one of the oldest networks around and is known for P2P file sharing capabilities. The applications can be downloaded from https://freenetproject.org/download.html. Once downloaded, simply install the application and run it.

Freenet will open up a browser once it is run. The webpage displayed will provide us a series of choices to determine the security and data usage limit we desire to have and then perform the setup accordingly. Once this setup is complete, we will be presented with the freenet homepage. This page contains links to indexes of freenet websites (called freesites) similar to the Tor wikis and documentation related to other associated softwares and HOW TO guides. In the homepage there is also a search box which allows to search through freesites. Using certain plugins such as freetalk and freemail we can also use freenet to have communication over freenet.



My bookmarks[Edit]

Directories of websites on Freenet

Enzo's Index (Links to most Freenet web sites, sorted by category to make it easier to find what you want)

Linkageddon (Links to every Freenet website, sorted by when they were last updated, including some very offensive sites. Be careful what you click on!)

Nerdageddon (Similar to Linkageddon but with the most offensive content removed)

Freenet related software and documentation

Freenet Social Networking Guide (Step by step guide to how to set up anonymous email, forums, chat, social tools etc on Freenet. Strongly recommended!)

Freenet Message System (Message boards over Freenet)

Freemail (Email over Freenet)

Publish! (How to publish web sites on freenet)

Freesite HOWTO (Another guide to publishing a website to Freenet)

Sone (Social chat over Freenet)

jSite (Essential tool for uploading websites to Freenet)

Freenet Documentation Wiki (Freenet documentation wiki)

Freenet team's blogs

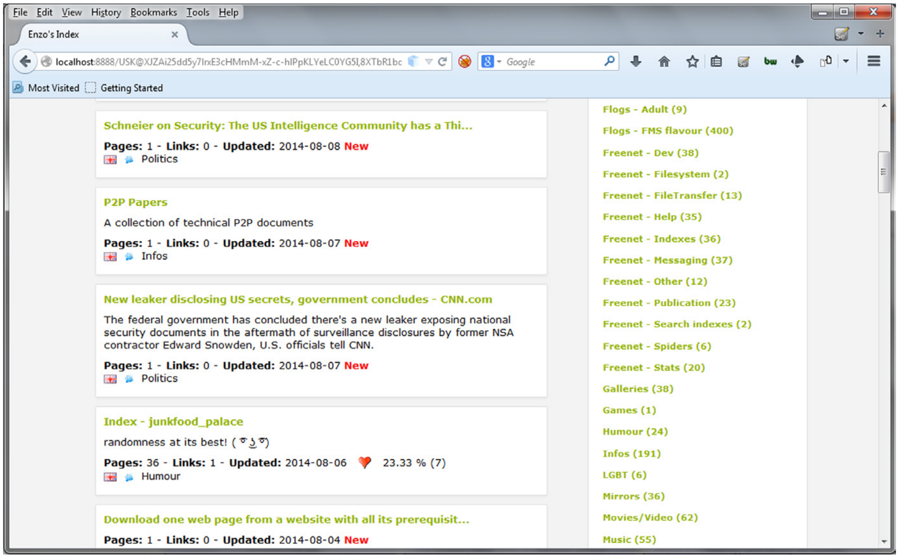
Toad (Chief Freenet developer's personal blog)

English Switch to advanced mode Security levels: LOW LOW 5 / 10

FIGURE 9.19

Freenet homepage.

Enzo's index is one such index which lists many freesites and has divided them under categories. Another such list is Linkageddon.


File Edit View History Bookmarks Tools Help
Enzo's Index
localhost:8888/USK@XJZAi25dd5y7IrxE3cHMmM-xZ-c-hIPpKLYeLC0YG5I,8XTbR1bc
Google
Most Visited
Getting Started

Schneier on Security: The US Intelligence Community has a Thi...
Pages: 1 - **Links:** 0 - **Updated:** 2014-08-08 New
Politics

P2P Papers
A collection of technical P2P documents
Pages: 1 - **Links:** 0 - **Updated:** 2014-08-07 New
Infos

New leaker disclosing US secrets, government concludes - CNN.com
The federal government has concluded there's a new leaker exposing national security documents in the aftermath of surveillance disclosures by former NSA contractor Edward Snowden, U.S. officials tell CNN.
Pages: 1 - **Links:** 0 - **Updated:** 2014-08-07 New
Politics

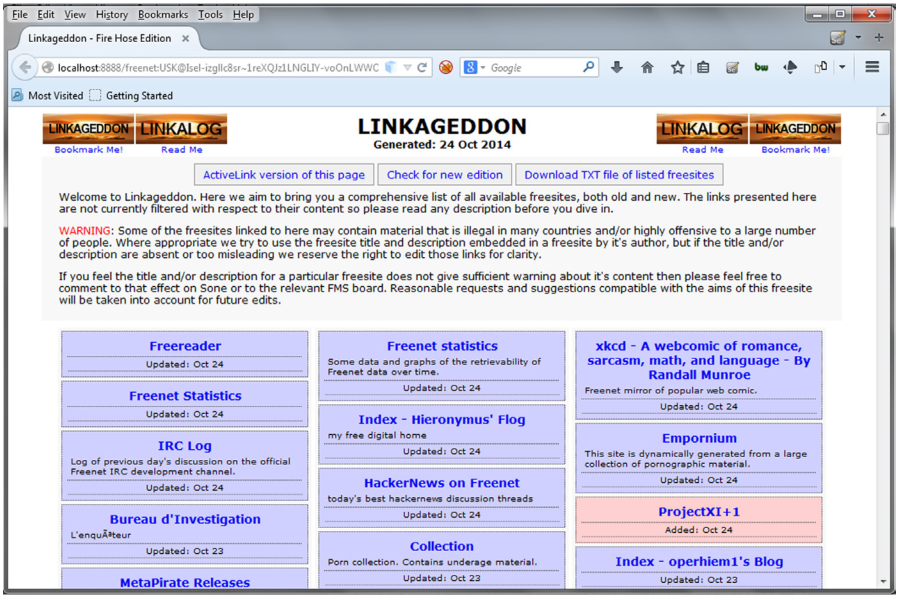
Index - junkfood_palace
randomness at its best! (͡° ͜ʖ ͡°)
Pages: 36 - **Links:** 1 - **Updated:** 2014-08-06 ♥ 23.33 % (7)
Humour

Download one web page from a website with all its prerequisit...
Pages: 1 - **Links:** 0 - **Updated:** 2014-08-04 New

Flogs - Adult (9)
Flogs - FMS flavour (400)
Freenet - Dev (38)
Freenet - Filesystem (2)
Freenet - FileTransfer (13)
Freenet - Help (35)
Freenet - Indexes (36)
Freenet - Messaging (37)
Freenet - Other (12)
Freenet - Publication (23)
Freenet - Search indexes (2)
Freenet - Spiders (6)
Freenet - Stats (20)
Galleries (38)
Games (1)
Humour (24)
Infos (191)
LGBT (6)
Mirrors (36)
Movies/Video (62)
Music (55)

FIGURE 9.20

Freenet Enzo's Index.


File Edit View History Bookmarks Tools Help
Linkageddon - Fire Hose Edition
localhost:8888/freenet:USK@Isel-izgllc8sr~1reXQJz1LNGLIY-voOnLWWC
Google
Most Visited
Getting Started
LINKAGEDDON
Bookmark Me!
LINKALOG
Read Me
LINKALOG
Read Me
LINKAGEDDON
Bookmark Me!
ActiveLink version of this page
Check for new edition
Download TXT file of listed freesites

LINKAGEDDON
Generated: 24 Oct 2014

Welcome to Linkageddon. Here we aim to bring you a comprehensive list of all available freesites, both old and new. The links presented here are not currently filtered with respect to their content so please read any description before you dive in.

WARNING: Some of the freesites linked to here may contain material that is illegal in many countries and/or highly offensive to a large number of people. Where appropriate we try to use the freesite title and description embedded in a freesite by it's author, but if the title and/or description are absent or too misleading we reserve the right to edit those links for clarity.

If you feel the title and/or description for a particular freesite does not give sufficient warning about it's content then please feel free to comment to that effect on Sone or to the relevant FMS board. Reasonable requests and suggestions compatible with the aims of this freesite will be taken into account for future edits.

Freereader
Updated: Oct 24

Freenet Statistics
Updated: Oct 24

IRC Log
Log of previous day's discussion on the official Freenet IRC development channel.
Updated: Oct 24

Bureau d'Investigation
L'enquÃªteur
Updated: Oct 23

MetaPirate Releases

Freenet statistics
Some data and graphs of the retrievability of Freenet data over time.
Updated: Oct 24

Index - Hieronymus' Flog
my free digital home
Updated: Oct 24

HackerNews on Freenet
today's best hackernews discussion threads
Updated: Oct 24

Collection
Porn collection. Contains underage material.
Updated: Oct 23

xkcd - A webcomic of romance, sarcasm, math, and language - By Randall Munroe
Freenet mirror of popular web comic.
Updated: Oct 24

Empornium
This site is dynamically generated from a large collection of pornographic material.
Updated: Oct 24

ProjectXI+1
Added: Oct 24

Index - operhiem1's Blog
Updated: Oct 23

FIGURE 9.21

Freenet Linkageddon.

Freenet also allows us to connect with people whom we already know and are using freenet under the URL http://localhost:8888/friends/. For this we simply need to exchange a file called as noderefs with them and provide this file on the mentioned page and simply click on the add button at the bottom. Under the URL http://localhost:8888/downloads/ we can perform file sharing operations. Similar to other networks discussed, freenet also allows to create and share our websites in their network. Freenet maintains its own wiki https://wiki.freenetproject.org which lists information related to different features of it and about how to perform different operations including freesites setup.

Apart from these mentioned networks there are also some other networks which provide similar functionalities, but Tor, I2P, and freenet are the most popular ones.

In this chapter we moved on from exploring the regular internet and learned about some less explored regions of it. We discussed in detail about the deepweb, how to access it, how to create it, and what to expect there. We also learned about its uses and also how it is misused. We have also shared some associated resources which would help to explore them further, but be warned you never know what you might find there so act with your own discretion.

Till now we have learned about various tools, techniques, and sources of information which might help us to utilize the internet in a better and efficient way. Moving ahead we will learn about some tools and their utility in managing, visualizing, and analyzing all the collected data so that we can better understand and utilize the raw data to get actionable intelligence.

DISCLAIMER

The part of the internet that will be discussed in this chapter might also contain illegal and/or disturbing things. Readers are advised to use their discretion and act accordingly.