



finding obscure information that is perhaps too small a topic for someone to put on a web page.

Newsgroups are not used less today than they were years ago, before the web became the mainstream for sharing information. However, they also haven't grown as their popularity is replaced by new web services like blogs and forums.

Exercises:

- A. Using Google's groups, find the oldest newsgroup posting you can about security.
- B. Find other ways to use newsgroups - are there applications you can use to read newsgroups?
- C. How many newsgroups can you find that talk about computer hacking?

1.1.6 Websites

The *de facto* standard for sharing information is currently through a web browser. While we classify this all as "the web" the real term is "web services," as not everything on the web is a website. If you check e-mail using a web browser, you are using a web service. Often times, web services require privileges. This means you need a login name and password to gain access. Having access and the legal right to access is known as having "privileges". Hacking into a website to allow you to change the page may be having access, but since it is not your legal right to do so, it is not privileged access. We are only concerned with having privileged access, but as your experience grows with using the web, you will find many places give access to privileged areas by accident. As you find this, you should get into the habit of reporting this to the website owner.

Websites are searchable through a large number of search engines. It's even possible to make your own search engine if you have the time and hard drive space. Often, it's the search engines who get privileged access and pass it on to you. Sometimes it is in the form of cache. Cache is an area of memory on the search engine's server where the search engine stores pages that matched your search criteria. If you click on the link that says *cached*, instead of the actual link, then you will see a single page that shows what the search engine found during its search. The search engines save this information to prove that the search was valid – if, for instance, a page goes down or is changed between the time that you initiated your search and the time that you try to access the page that was returned – but you can also use the cached pages for other purposes, such as bypassing a slow server.

One of the most useful public caches is at <http://www.archive.org>. Here you will find cached versions of whole websites from over the years.

One final note on websites, do not assume you can trust the content of the websites you visit just because they appear in a search engine. Many hacker attacks and viruses are spread just by visiting a website or downloading programs to run. You can safeguard yourself by not downloading programs from untrusted websites and by making sure the browser you use is up-to-date on security patches.

Exercises:

- A. Using a search engine, find sites that may have mistakenly given privileged access to everyone. To do this, we will look for directory listings which are accessible when you don't go