

Security monitoring and hacking tools to be used in class or given as assignments. In the next few years we should expect to see more cloud based security as a service offerings. These services will lead to mind set change and new dimensioning.

1. <http://alienvault.com/community>
2. <http://www.zenoss.com/>
3. <http://www.spiceworks.com/>
4. <http://www.splunk.com/>
5. <http://www.zabbix.com/>
6. <http://www.eventid.net/firegen/>
7. <http://www.lansweeper.com/>
8. <http://nmap.org/>
9. <http://www.nagios.com/>
10. <http://www.ossec.net/>

Each student will be required to choose a presentation from any of the following hacker conferences (DEF CON, Black Hat and Chaos Communication Congress) and explain the functioning of the exploit or the contribution of the paper.

Discussion with IBM (Ethical Hacking Team), Brian O'Toole (Ericson) and Damieni

Video 3 Review at least 10 videos

Papers 3 Review at least 10 papers

Security Tools 5 Review at least 15 Security Tools

Intellectual property 3

Collect sensitive information you deem important and not easy to access. Give a concise description of the process and tools you used to get hold of the information.

What SMEs should do to protect their information assets i.e., how to lockdown their PCs and mobile devices

Lockdown the computer you are using and give an account of what you have done. Pick and describe one community project of your interest – this can be anything from security awareness. Recommend 3 videos, 3 papers and 5 security tools which will make me as an SMEs invest more in security. https everywhere by EFF.

Describe the vulnerability of software, its exploits and how to defend against. Make sure you include enough references.

Design a social engineering attack that may involve member of your class. Use the example to show or demonstrate the requirement for students to develop a security mind (security culture, security thinking) – Use the Embracing the Kobayashi Maru: Why you should teach your students to cheat, Gregory Conti and James Caroland, IEEE Security and Privacy, July/August 2011, pp 48-51

Reflect of the myriad of ways in which systems or software applications may be compromised. This is a sign of the difficult it takes to secure systems or making the claim that my system is safe incorrect in most cases

Defend yourself => US Cyber Command

How much money is enough for you to guarantee the security of your system?

Cybercrime, Cyberthreat, CyberEspionage and Cyber * > Knowledge based society

State sponsored cyberwar

Resilience

According to Richard Clarke and Robert Knake they say that the following areas of the internet must be secured for a better future:

Backbone – Tier 1 ISPs big pipes AT&T, Verizon, Level 3, Qwest, Sprint – Deep packet inspection line rate peering points; out of bound communication (not on the internet) zero day attacks black hole (or kill) morphed malware: Large data centres – managed security services

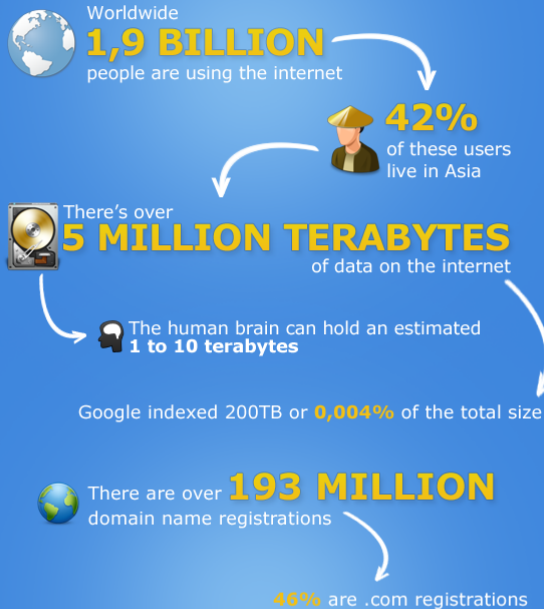
Secure power grid : need regulation

Defence: NIPRNET, SIPRNET air-gap; TS/SCI=JWICS

Attribution problem => air-gap

THE AWESOME SIZE OF THE INTERNET

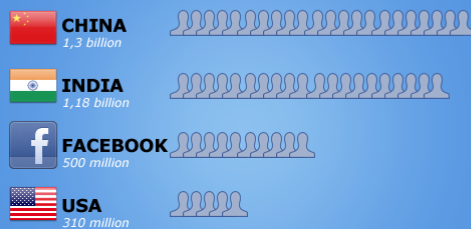
AN INFOGRAPHIC BY THEROXOR.COM



facebook



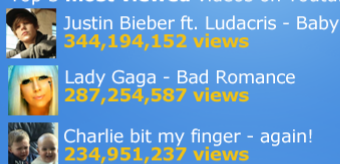
If Facebook were a country, it would be the **third-largest** country in the world, after China and India



You Tube



Top 3 **most viewed** videos on Youtube:



THE STATE *of the* INTERNET:

SUMMING UP 2010

STAYING CONNECTED *through* EMAIL

1.9B

Number of people who use email globally

294B

Average number of emails sent per day

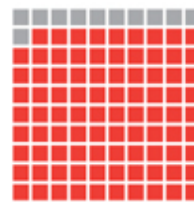
107T

Number of emails sent in 2010

2.9 billion known email accounts worldwide



25% of these are corporate accounts



An estimated 89% of all emails were spam related in 2010

A WORLD *of* WEBSITES

255M

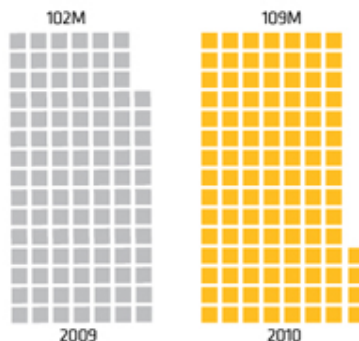
Number of websites on the Internet (as of Dec. 2010)

21.4M

Number of new websites in 2010

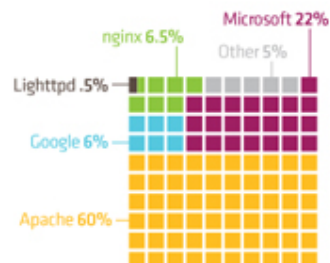
DOMAIN NAMES:

By the end of 2010 the number of domain names had grown 7% from 2009.



WEB SERVERS MARKET SHARE, DECEMBER 2010:

Web servers saw consistent growth in the number of new websites being created. The number of websites on the Lighttpd server grew by 55.7% in 2010, more than any other web server.



INTERNET USERS *on the* RISE

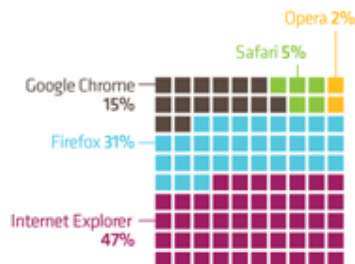
2B

Total number of Internet users worldwide

14%

change to "Increase in number of Internet users worldwide in 2010"

WHAT WERE THE MOST POPULAR WEB BROWSERS IN 2010, BY MARKET SHARE?



THE GLOBAL STATE OF INTERNET USERS, BY REGION:



THE GLOBAL STATE OF SPAM, BY REGION:

