NARLabs 國家實驗研究院

國家高速網路與計算中心

Kali Linux 滲透測試實務

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Google Me.

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- 現任：財團法人國家實驗研究院 國家高速網路與計算中心 副研究員
- 重要經歷：
  - 國立成功大學研究發展基金會 助理研究員
  - 中華民國資料保護協會 1st監事
  - 中華民國南部科學園區產學協會 5th理事、6th監事
  - 台灣科技化服務協會 3rd理事
  - 台灣雲端安全聯盟 1st 理事長
  - 台灣資訊安全聯合發展協會 1st 常務監事
  - The Honeynet Project Taiwan Chapter Leader
  - Cloud Security Alliance Taiwan Chapter Founder and Director of Research
  - 部落客：http://blog.yilang.org
  - Facebook: Yi-Lang Tsai
  - 自由作家
    - 電腦圖書著作34本
    - Information Security(資安人)、Linux Guide、NetAdmin、網路資訊等文章，計80餘篇
- 專業證照：
  - RHCE、CCNA、CCAI、CEH、CHFI、ACIA、ITIL Foundation、ISO 27001 LAC、ISO 20000 LAC、BS10012 LAC、CSA STAR

The Honeynet PROJECT®

CSA cloud security alliance

redhat. CERTIFIED ENGINEER

CCNA CISCO CERTIFIED

C|EH™ Certified Ethical Hacker

C|HFI™ Computer Hacking Forensic INVESTIGATOR

ITIL foundation

AboutMe

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- 現任 :
  - 國家高速網路與計算中心 專案佐理工程師
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  - RAT Core Members
- 經歷 :
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  - 台中二十號倉庫 網管工程師
- 興趣 :
  - 專研駭客攻擊手法

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Agenda

- 滲透測試介紹
- Kali Linux 介紹
- 建立滲透測試環境
- 偵查
- 掃描
- 密碼破解

課程目標

- 本課程的目標在於透過實際應用，讓學員可以瞭解滲透測試之目的以及流程，並掌握其所需之相關技巧。

注意事項

- 課程期間，請對指定範圍內的資訊設備進行測試。
- 課程結束後，使用任何網路攻擊技巧對任何資訊設備進行攻擊皆屬個人行為。
- 請勿違反本國電腦犯罪相關法令！

國內電腦犯罪相關法令

- 刑法第36章妨礙電腦使用罪
  - 第358條
    - 無故輸入他人帳號密碼、破解使用電腦之保護措施或利用電腦系統之漏洞，而侵入他人之電腦或其相關設備者，處3年以下有期徒刑、拘役或科或併科10萬元以下罰金。
  - 第359條
    - 無故取得、刪除或變更他人電腦或其相關設備之電磁紀錄，致生損害於公眾或他人者，處五年以下有期徒刑、拘役或科或併科二十萬元以下罰金。

國內電腦犯罪相關法令

- 刑法第36章妨礙電腦使用罪
  - 第360條
    - 無故以電腦程式或其他電磁方式干擾他人電腦或其相關設備，致生損害於公眾或他人者，處三年以下有期徒刑、拘役或科或併科十萬元以下罰金。
  - 第361條
    - 對於公務機關之電腦或其相關設備犯前三條之罪者，加重其刑至二分之一。
  - 第362條
    - 第358條至第360條之罪，須告訴乃論。

滲透測試

- 滲透測試(Penetration Test，簡稱PT)是委託專業的資安人員，以模擬外部攻擊者的方式，進行特定系統的攻擊以及入侵，藉此進行單位內的系統安全評估。
- 滲透測試可以使用網路探測、弱點掃描、社交工程…等手法。

滲透測試的目的

- 實現系統漏洞所帶來的實際威脅以及風險。
- 提供系統漏洞資訊與攻擊難度給受測單位進行完整的風險評估
- 掌握最新的攻擊手法
- 除了系統安全，組織內成員的資安意識，與實體安全一樣都很重要

滲透測試的類型

- White-box testing
  - 與受測單位的代表一同進行測試。測試前充分掌握內部情報，針對單位內系統進行廣泛的弱點探測與評估。缺點為由於是在受控制的環境中進行，所以無法確認緊急應變系統是否有效運作。
- Black-box testing
  - 完全模擬由外部攻擊者進行入侵，可以同時測試系統安全以及緊急應變程序，但是測試難度較高。
- Grey-box testing
  - White-box+Grey-box

滲透測試的方法

滲透測試參考的標準與準則

- The Penetration Testing Execution Standard (簡稱PTES)
  - http://www.pentest-standard.org/index.php/Main_Page
- Open Source Security Testing Methodology Manual(簡稱OSSTMM)
  - http://www.isecom.org/research/osstmm.html
- Open Web Application Security Project(簡稱OWASP)
  - https://www.owasp.org/index.php/Main_Page

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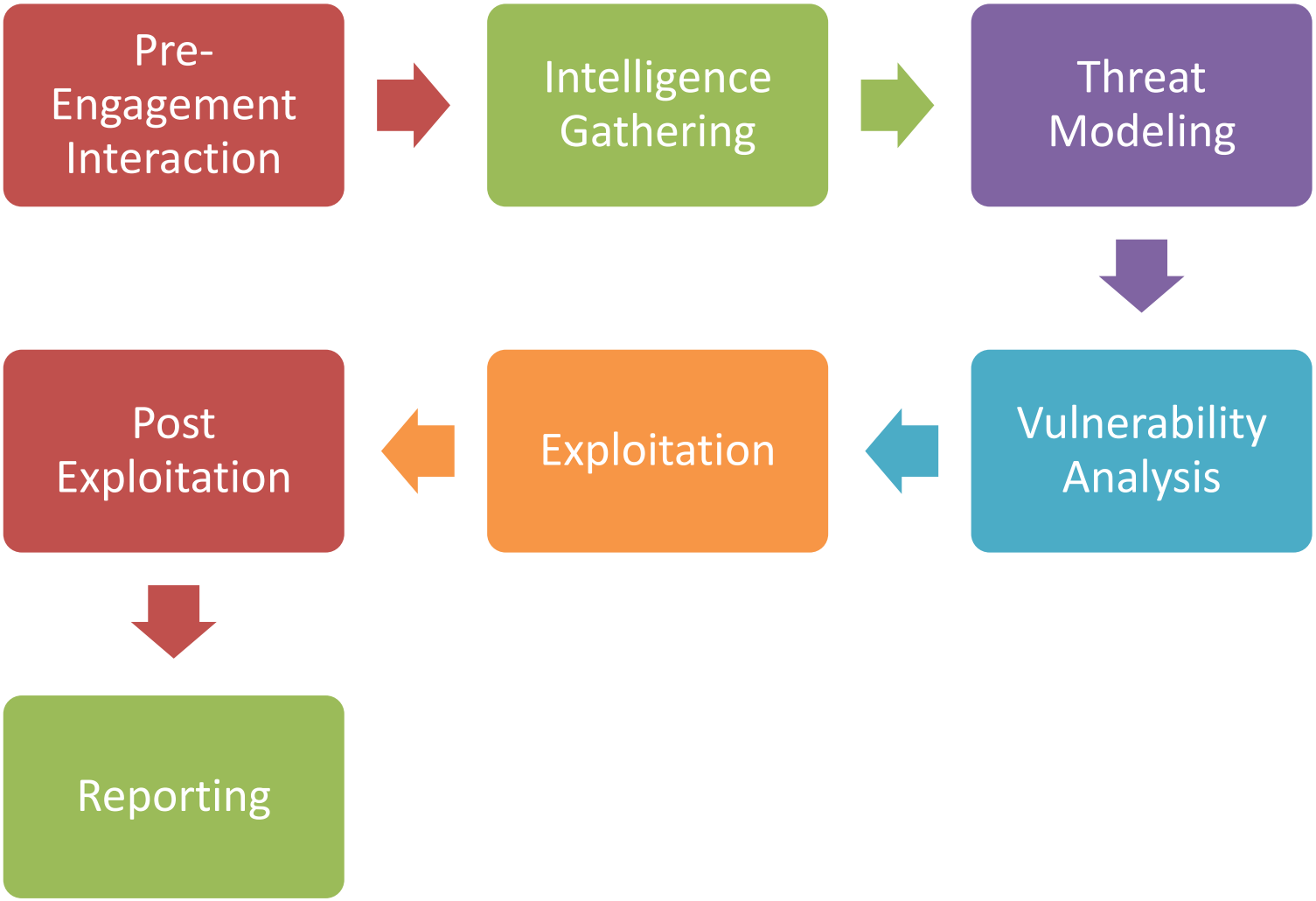
滲透測試的流程



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Crack With Hacker

駭客入侵五大步驟

- 偵查
- 掃描
- 獲得存取
- 維持存取
- 湮滅蹤跡

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情報收集

- Intelligence Gathering
  - Target selection
    - 目標選擇
  - Open Source Intelligence(OSINT)
    - 蒐集公開情報
  - Covert gathering
    - 秘密地進行主動測試並蒐集情資
  - Human Intelligence(HUMINT)
    - 透過人員訪談，找出可能的情資
  - Identify Protection Mechanisms
    - 辨識防護機制

威脅定義

- Threat Modeling
  - Business asset analysis
    - 企業資產分析
  - Business process analysis
    - 企業流程分析
  - Threat analysis
    - 威脅分析
  - Finding relevant news of comparable organizations being compromised
    - 他山之石可以攻錯

駭客入侵五大步驟ˇ

- 偵查
- 掃描
- 獲得存取
- 維持存取
- 湮滅蹤跡

弱點分析

- Vulnerability Analysis
  - Active Testing
    - 主動測試
  - Passive Testing
    - 被動測試
  - Public research
    - 利用公開的系統漏洞資訊
  - Personal research
    - 模擬目標系統，嘗試找尋潛在漏洞
  - Validation
    - 關聯性分析與驗證

駭客入侵五大步驟ˇ

- 偵查
- 掃描
- 獲得存取
- 維持存取
- 湮滅蹤跡

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漏洞攻擊

- Exploitation
  - Ensure counter measurement bypass
    - 繞過現有資安機制
  - Customized exploitation avenue
    - 客製化的攻擊手法
  - Detection bypass
    - 必須要躲過偵測系統
  - Type of attacks
    - 選擇攻擊手法

系統滲透

- Post Exploitation
  - Infrastructure analysis
    - 完整的組織架構分析
  - High value targets
    - 確認高價值目標
  - Business impact attacks
    - 評估滲透後可以造成的企業衝擊規模
  - Cleanup
    - 清除足跡與相關事證
  - Persistance
    - 確保控制權

駭客入侵五大步驟ˇ

- 偵查
- 掃描
- 獲得存取
- 維持存取
- 湮滅蹤跡

清除相關Log

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[2008-10-09 00:56:32.292] CHSVSR07 21384 22340 SW_MessageHandler::Close - - - - 5 65535 "Shutdown complete."
[2008-10-09 00:56:32.573] CHSVSR07 18568 18792 SW_MessageHandler::Close - - - - 5 65535 "Shutdown complete."
[2008-10-09 00:56:32.573] CHSVSR07 18900 20176 SW_MessageHandler::Close - - - - 5 65535 "Shutdown complete."
[2008-10-09 00:56:32.573] CHSVSR07 21572 17944 SW_MessageHandler::Close - - - - 5 65535 "Shutdown complete."
[2008-10-09 00:58:37.375] - 1140 1164 SW_MessageHandler::Open - - - - 5 65535 "Initialization complete."
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[2008-10-09 01:15:31.385] CHSVSR07 5192 5384 SW_SystemDispatcher::init - - - - 0 44951 "Successfully started Microsoft System Center Application Virtualization Management S
[2008-10-09 01:15:56.785] CHSVSR07 7432 8120 SW_LicenseConduitLogger::LogMessage 1956138080 "Default Provider" "Justin Zarb" TECHDES.001/TECHDES.001.sft 0 40976 "License Se
[2008-10-09 01:15:56.941] CHSVSR07 7432 8120 SW_RTSPHandler::HandleSetup 1956138080 "Default Provider" "Justin Zarb" TECHDES.001/TECHDES.001.sft 0 40960 "Session Setup"
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[2008-10-09 06:48:44.656] CHSVSR07 7432 6572 SW_DataConnectionPool::Reconnect - "Default Provider" ecoe - 2 41543 "Connection to  data store on host CHSSQL01\BSQSTEPS faile
[2008-10-09 06:48:44.656] CHSVSR07 7432 6572 SW_ServerAuthenticationTask::Authorize - "Default Provider" ecoe - 2 41472 "Module execution failed."
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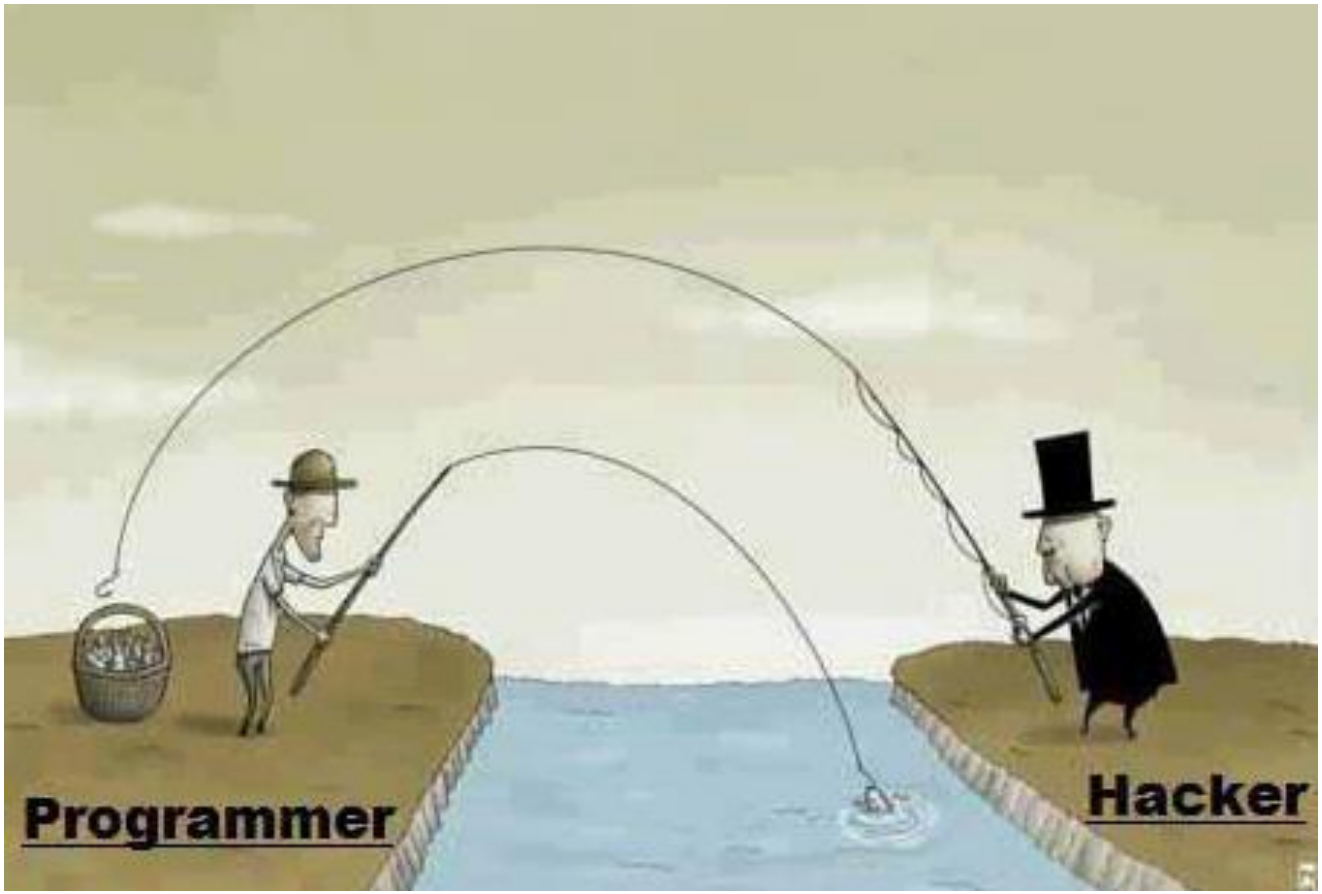
Hacker 最常做的就是



相關網站

- Exploit DB
  - http://www.exploit-db.com/
- CVE
  - http://cve.mitre.org/
- 1337 Day
  - http://1337day.com/
- Packetstorm
  - http://packetstormsecurity.com/
- SCAP
  - http://www.scap.org.cn/
- Zone-h
  - http://www.zone-h.org/

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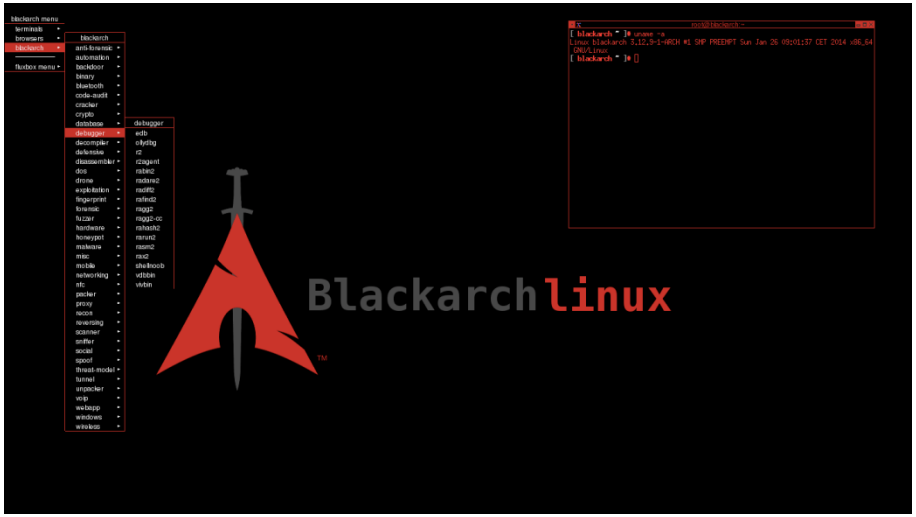
Penetration Test Operating System



滲透測試環境


KALI
CREATE BOOTABLE
KALI USB


KALI LINUX IN THE CLOUD


NEXUS 10 TABLET
NEXUS 7 MINI-TABLET
NEXUS 5 MOBILE PHONE

建立滲透測試環境

- Update Kali
- Install Chrome
- 跳板
- 帳號/密碼
  - root/toor

vmware

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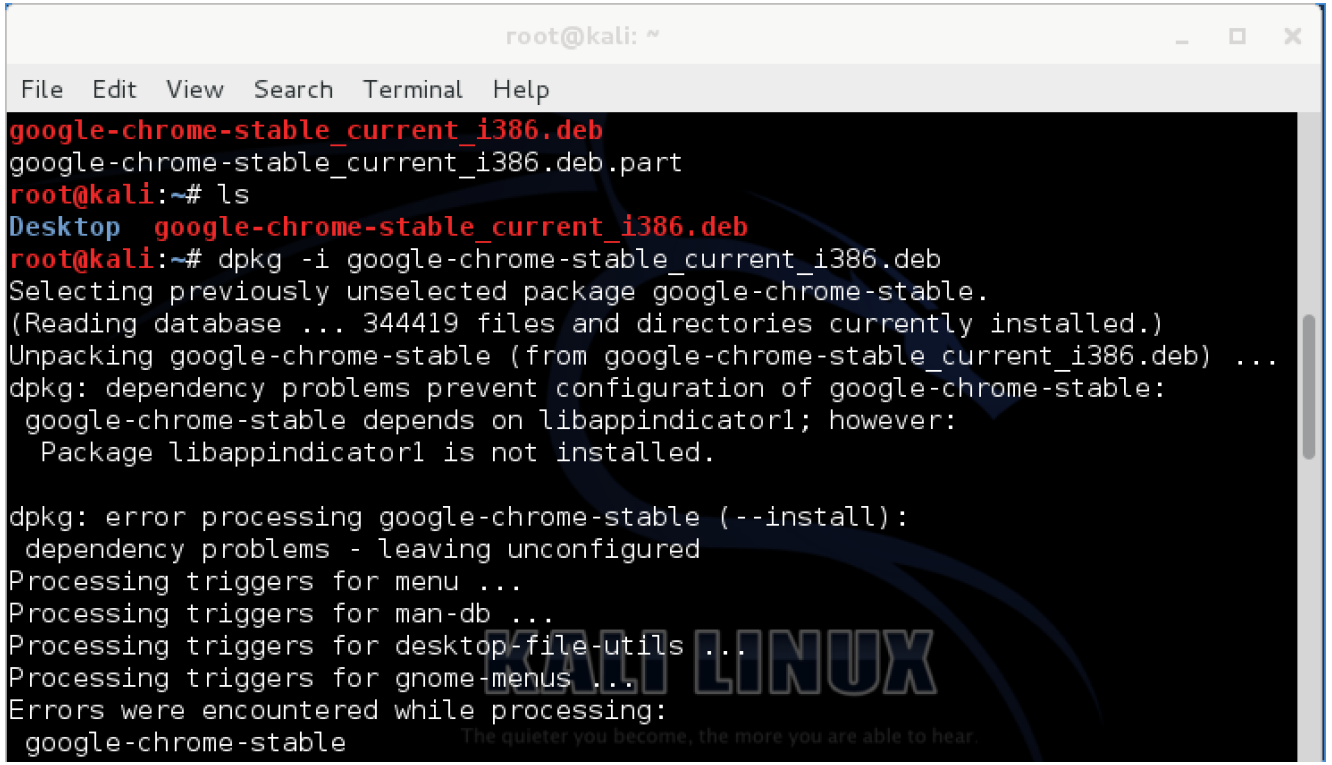
Update Kali

- 更新Kali 以確保本身的狀態是最新的
  - $ apt-get update
  - $ apt-get upgrade

GoogleChrome

dpkg – i google-chrome-stable_current_i386.deb

- 如果安裝上有問題的話
  - apt-get install -f
  - dpkg -i google-chrome-stable_current_i386.deb



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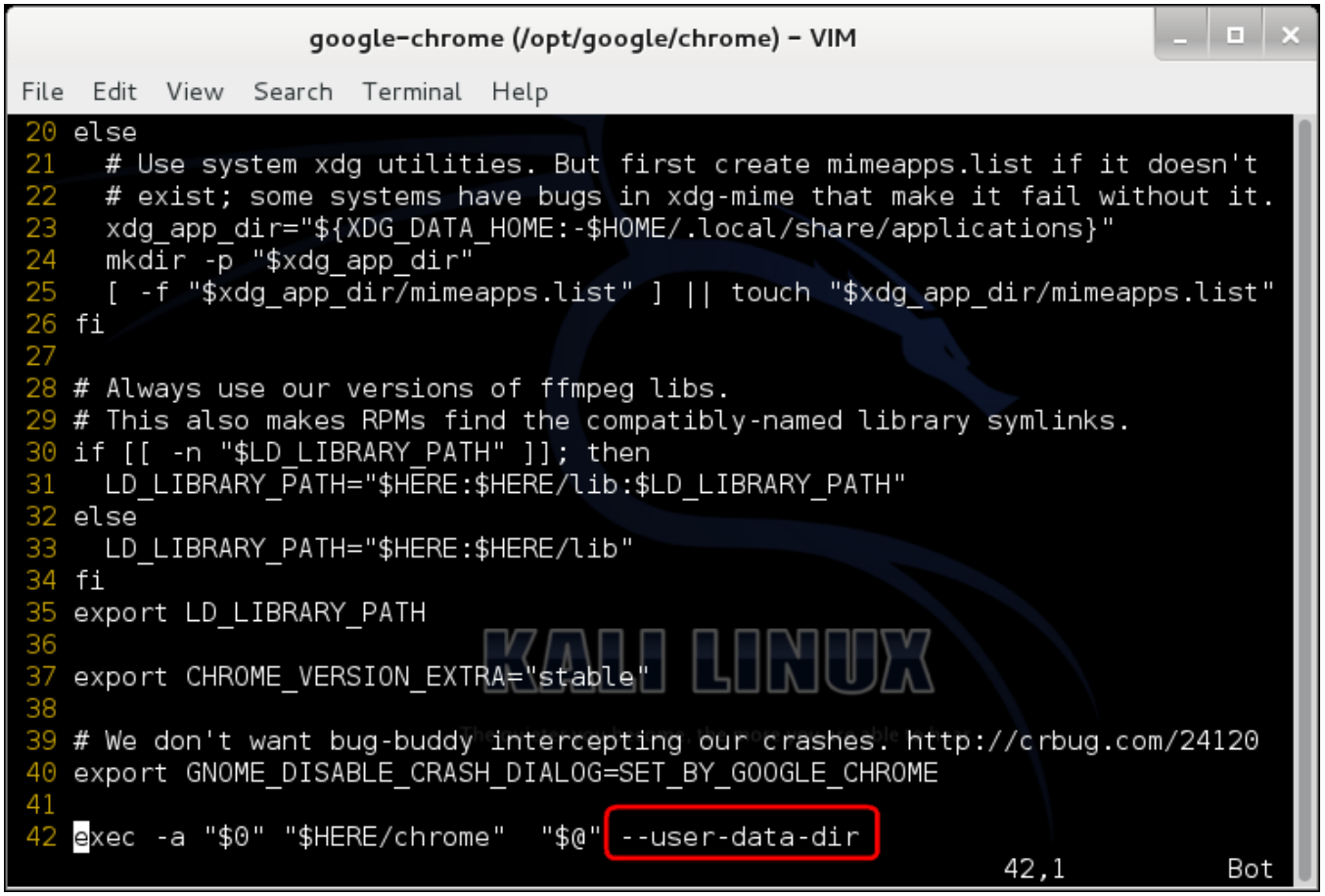
GoogleChrome

- vim /opt/google/chrome/google-chrome



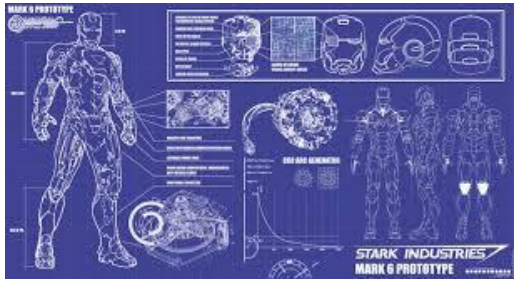
VPN 連線

- 新增VPN連線
  - apt-get install network-manager-openvpn-gnome
  - apt-get install network-manager-pptp
  - apt-get install network-manager-pptp-gnome
  - apt-get install network-manager-strongswan
  - apt-get install network-manager-vpnc
  - apt-get install network-manager-vpnc-gnome

  - /etc/init.d/network-manager restart

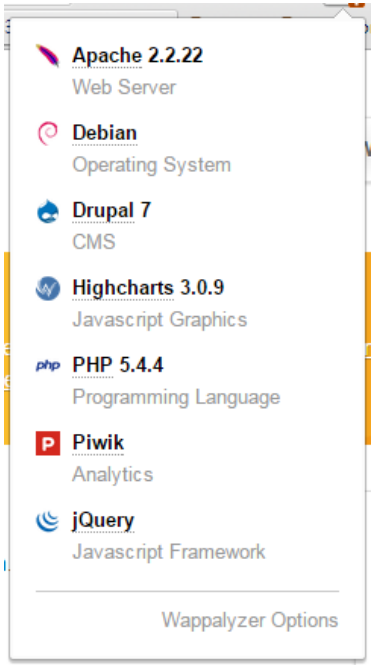
資訊蒐集

- 資訊蒐集為滲透測試之首要工作，收集的內容包含：
  - 網路架構
  - DNS資訊
  - 主機資訊
  - Email帳號
  - SNMP資訊
  - 通訊錄
  - 文件檔
  - 其他

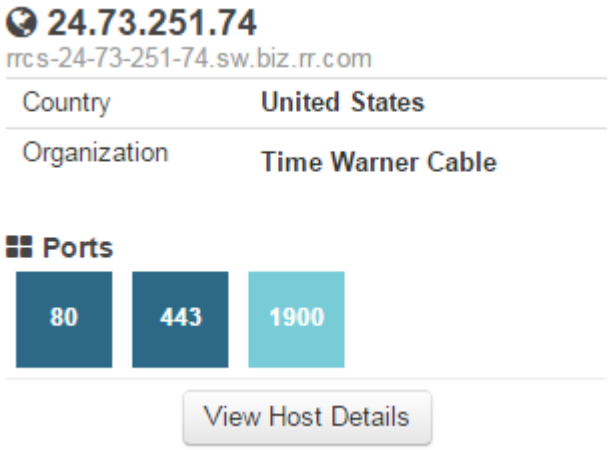


關於瀏覽器的套件

- wappalyzer小工具有助於了解一個網站所使用的系統，例如:作業系統版本、所使用的程式語言、以及這個網站有用什麼樣的套件等

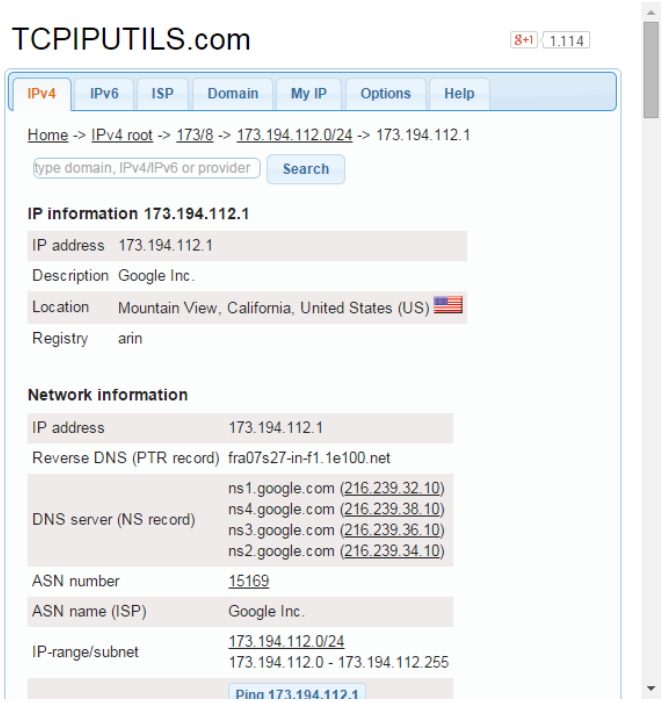


- Shodan 可以很快地告訴你現在目前網站的IP、所屬位址、甚至可以告訴你目前這台伺服器開的服務，以及伺服器所使用的套件。

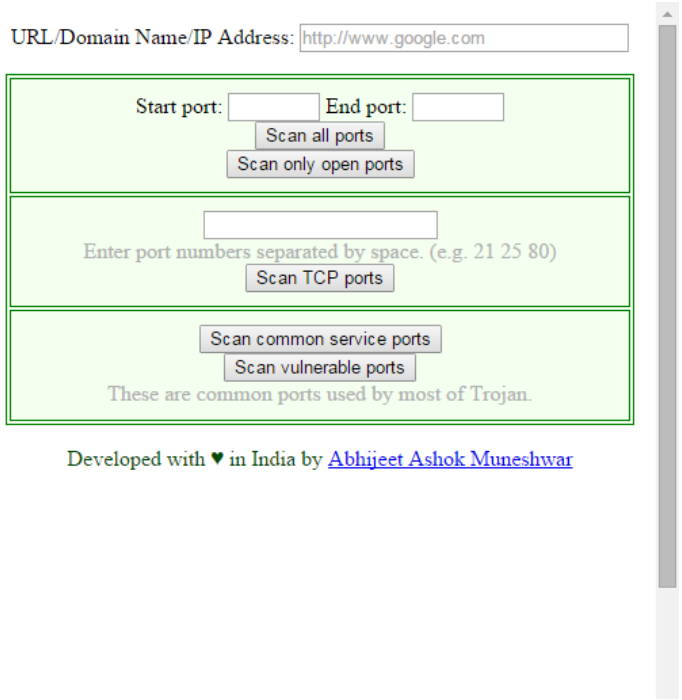


關於瀏覽器的套件

- ip-address-and-domain 小工具有助於了解網域相關資訊



- PortScan可以幫助你檢測對目標主機進行服務的掃瞄



資訊收集

- Google hacking
- 主機資訊收集
  - Maltego
- Dns 資訊收集
  - Dnsmap
  - Dnswalk

NARLabs

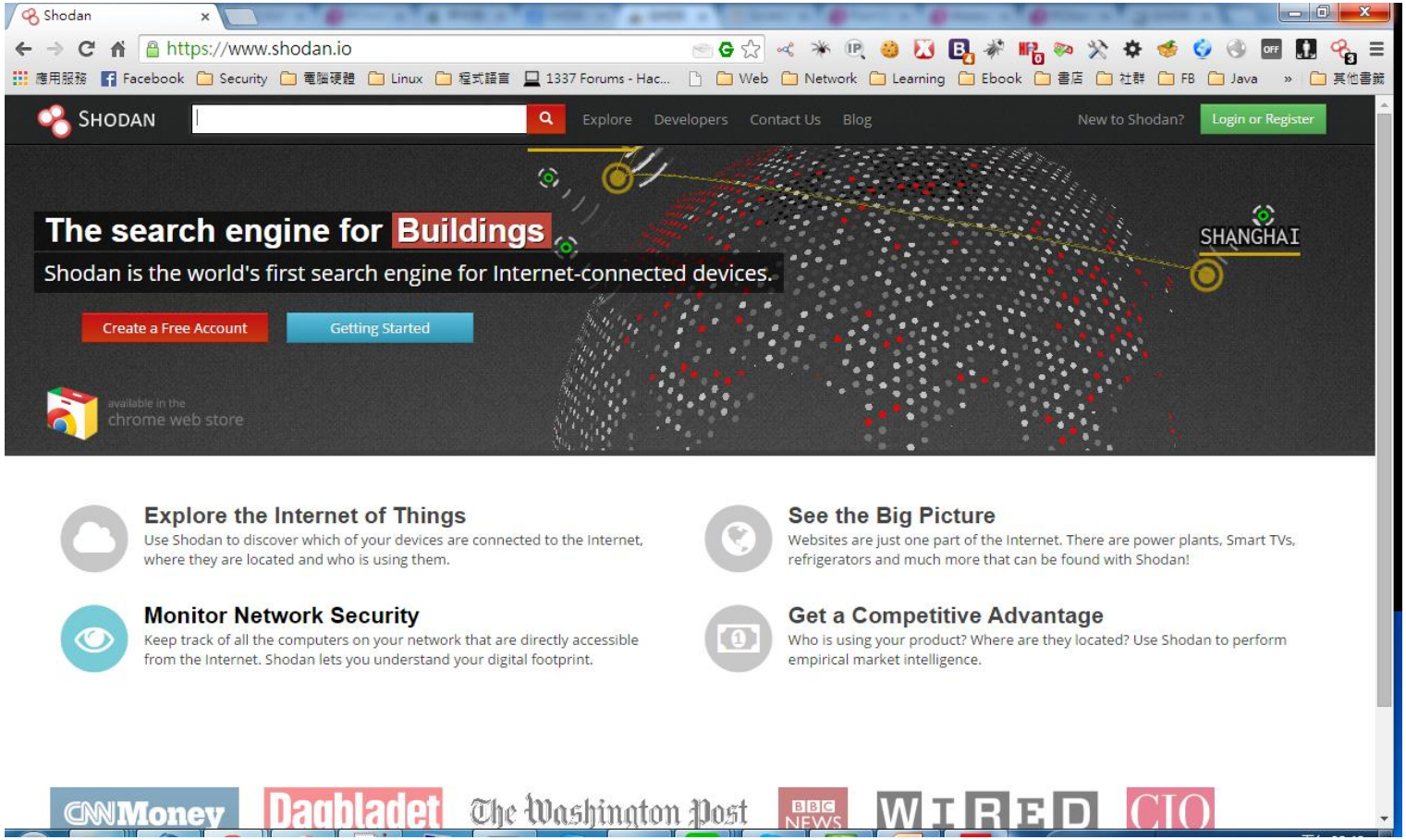
GoogleHacking

- site: (.edu, .gov, honeynet.org.tw)
- filetype: (txt, xls, mdb, pdf, .log)
- Intitle / allintitle
- Inurl / allinurl

GHDB with Chrome

- Google Hack Data Base - application to work with GHDB. Choose a category and click on the necessary query.

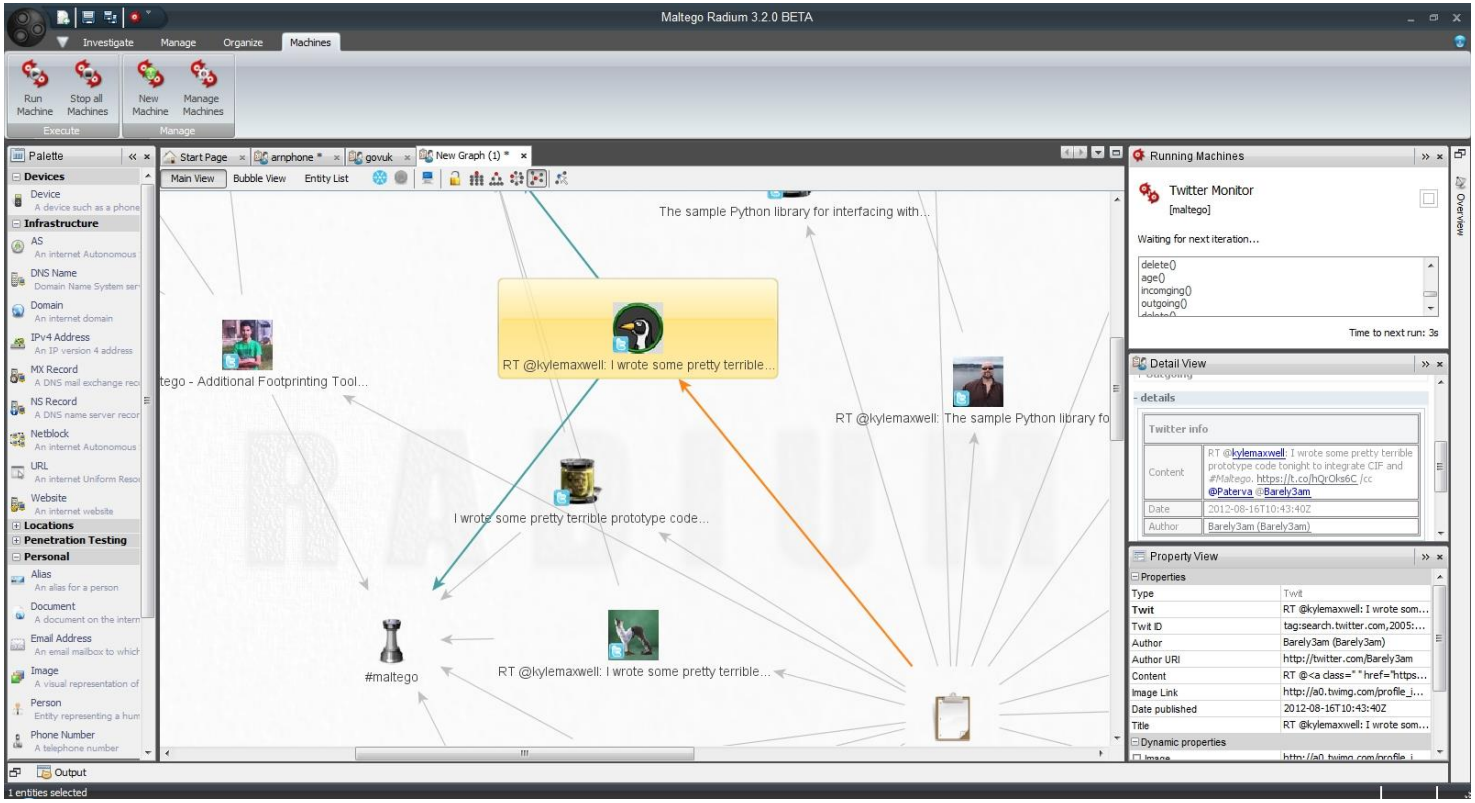
SHODAN



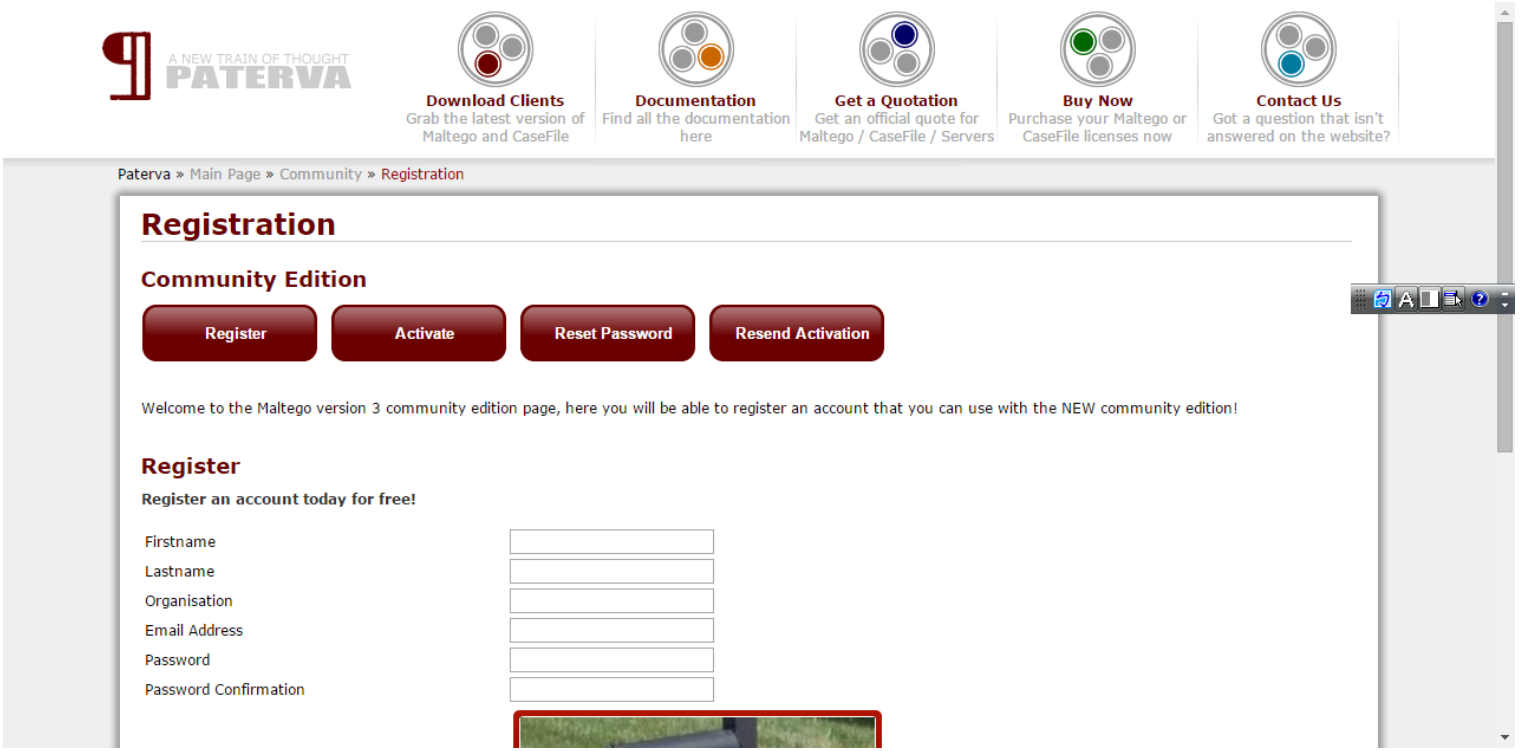
https://www.shodan.io/

Maltego

- Maltego 是一套網路情報與偵察應用工具，可以清楚呈現網路環境中的威脅關係圖像之平台。它可以將一個網路架構中的單個實體的所有關係完整的表現出來。



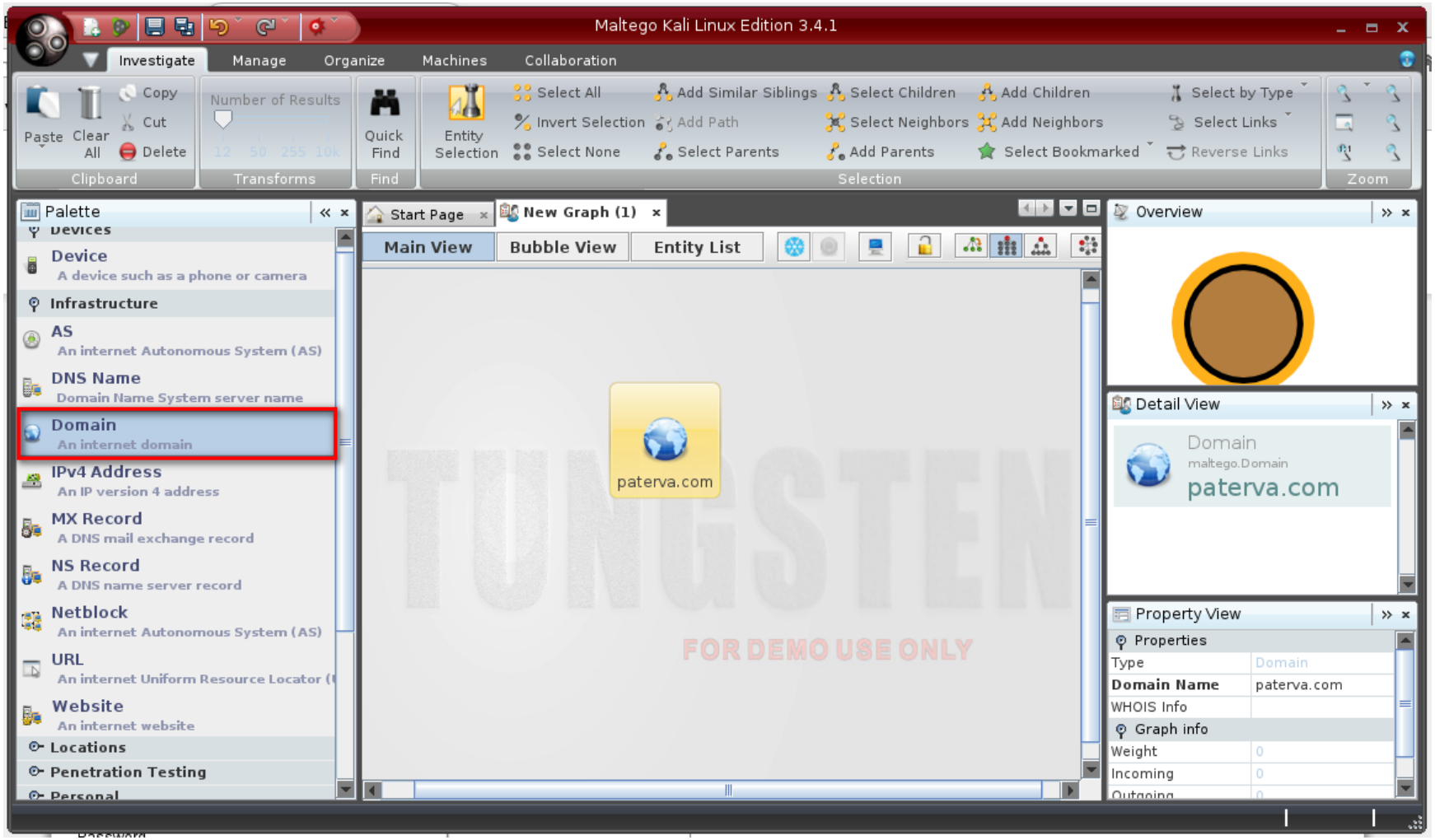
先註冊一個帳號



- https://www.paterva.com/web6/community/maltego/

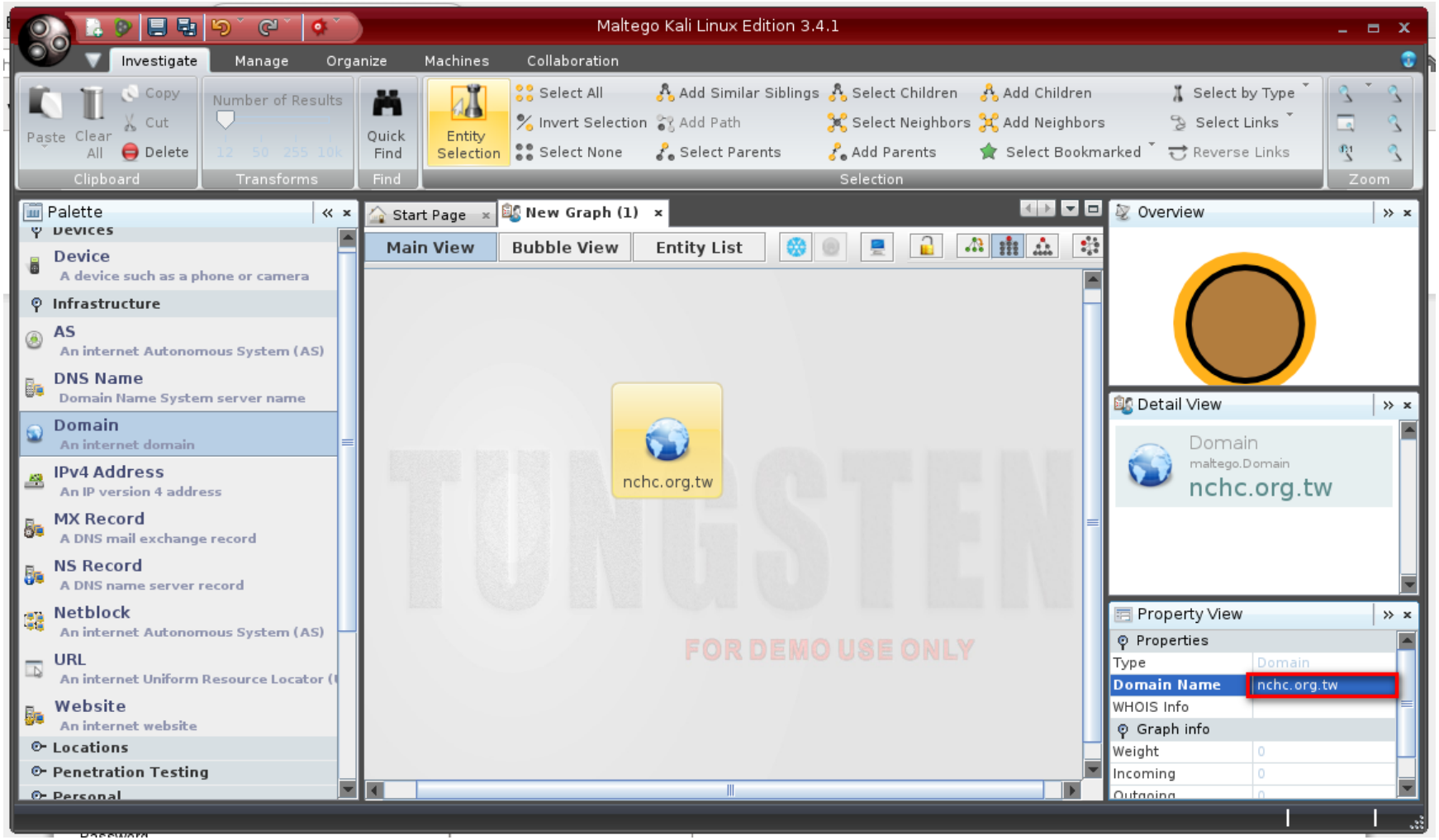
NARLabs

Maltego



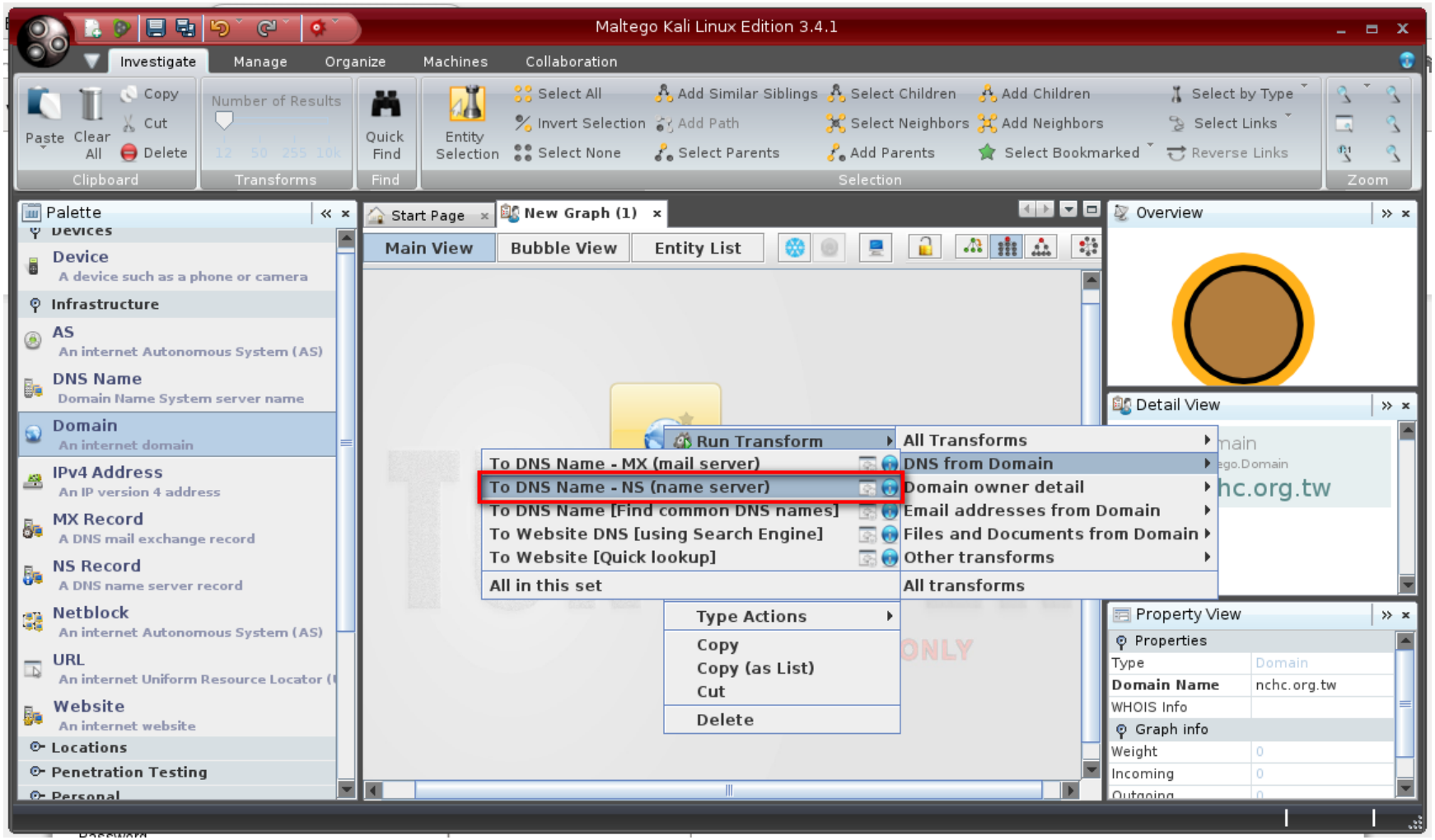
NARLabs

Maltego



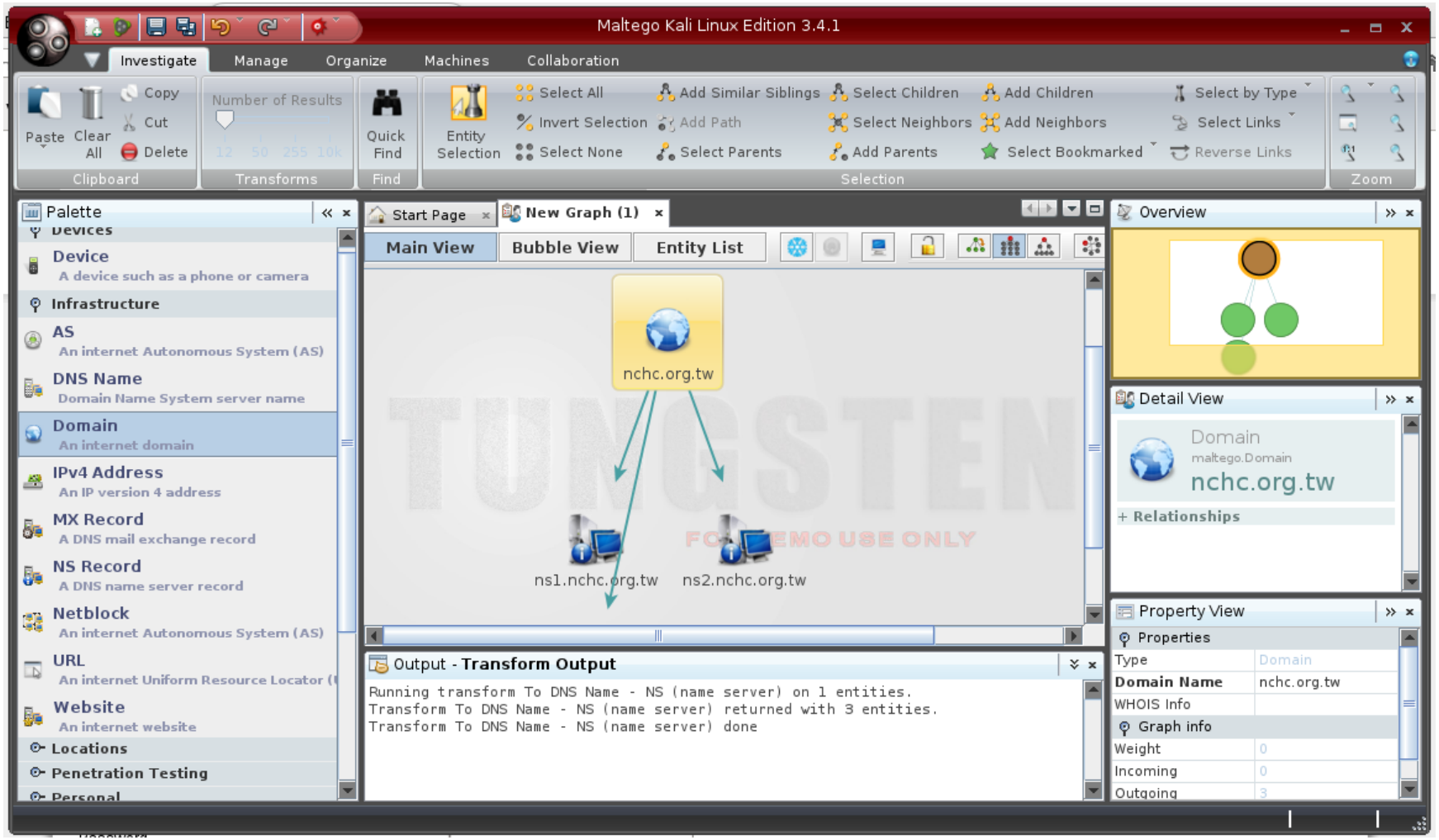
NARLabs

Maltego



NARLabs

Maltego

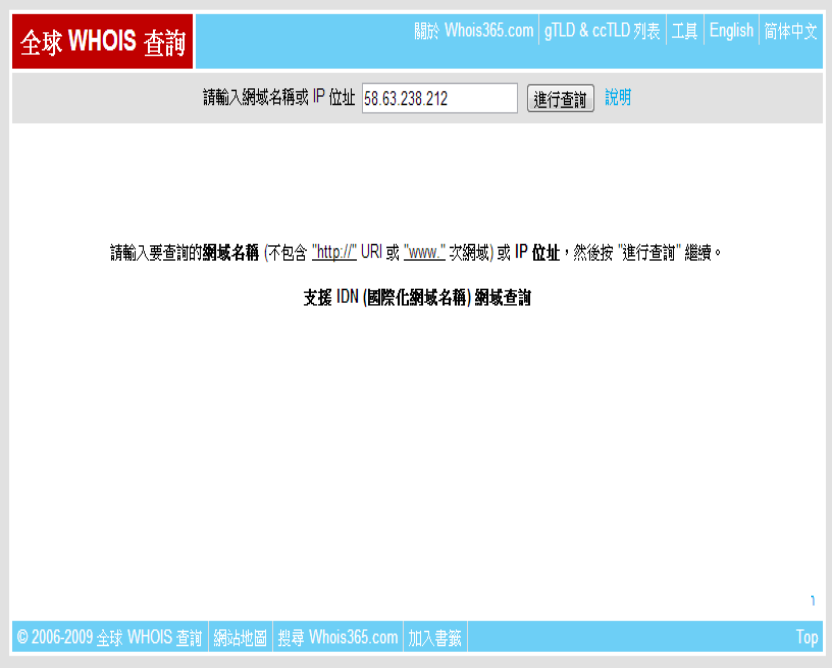


DNS紀錄的類型

- DNS record
  - **NS**(name server):網域名稱
  - **A**(address):網域名稱所對應的IPv4位址
  - **AAAA**(address):網域名稱所對應的IPv6位址
  - **MX**(mail exchanger)：郵件伺服器
  - **PTR**(pointer):反解資訊

DNS資訊蒐集

- 網路公開資訊查詢
  - http://www.whois365.com/tw/



關於 Dns Zone transfer

資安人 INFO SECURITY
作對事、用對方法、找對夥伴

台北場:10月23日(四) 新竹場:10月24日(五)
特別演講貴賓
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首頁 | 焦點新聞 | 資安知識庫 | 研討會 | 產業快訊 | 個資法專區 | 資安急診室 | 資安免費工具 | VIP | [免費報名]

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Share

透過DNS區域轉送攻擊 政府、電信主機資訊被看光光

作者：張維君 -05/12/2014

駭客在入侵企業系統前，必定會以各種刺探方式掌握目標對象的主機、IP位址、設備等資訊，再搭配系統弱點就可以長驅直入。早在15年前就被提出的DNS區域轉送攻擊(Zone Transfer)，正是可被用來取得組織內部伺服器資訊的手法，目前全台卻仍有包括台北市政府在內的政府機關、知名電信業者、電子商務、人力銀行等網站有此漏洞，其系統正暴露在高度風險之中。

資安廠商DEVCORE在進行網路監控時發現此一問題，在Alexa TW Top 525當中有48個網域仍存有Zone Transfer漏洞。DEVCORE執行長翁浩正表示，透過此一漏洞，即可讓駭客掌握目標對象的內網配置，包括有哪些主機、主機IP位址或設備等資訊，只要再搭配未修補的系統弱點，很容易就被取得控制權限。

翁浩正進一步指出，此一漏洞屬於網管設定的問題，在Windows系統只要到伺服器管理

「謹守智財 延續企業競爭力」研討會
觀念對了、方法對了
就可將有限資源極大化應用
台北場： 10月23日(四)
新竹場： 10月24日(五)
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本週新聞點閱排行

內賊難防！建立及早發現與完善稽核防護機制

勇奪2014全球駭客大賽亞軍 台灣駭客團隊HITCON

Hacktivism發酵 駭客更愛竊取大企業的資料

無需過度恐慌，但別掉以輕心：Shellshock

NASA又傳員工筆電遭竊 至少萬筆個資外洩

DDoS攻擊手法與防禦對策一DDoS網災來襲 政府準備好了嗎？＜攻防技術篇之二＞

http://www.informationsecurity.com.tw/article/article_detail.aspx?aid=7846

關於 Dns Zone transfer 檢測

- Linux 檢測
  - dig +nostats +nocomments +nocmd NS zonetransfer.me
  - dig axfr zonetransfer.me @ns12.zoneedit.com
- Windows 檢測
  - nslookup -type=ns zonetransfer.me
  - nslookup

    server ns12.zoneedit.com

    ls -d zonetransfer.me

```
C:\Users\chingshiung>nslookup -type=ns zonetransfer.me
伺服器:  UnKnown
Address:  172.20.10.1

未經授權的回答:
zonetransfer.me nameserver = nsztm1.digi.ninja
zonetransfer.me nameserver = nsztm2.digi.ninja
```

http://digi.ninja/projects/zonetransferme.php

關於 Dns Zone transfer 檢測

```
C:\Users\chingshiung>nslookup
預設伺服器:  UnKnown
Address:  172.20.10.1

> server nsztm1.digi.ninja
預設伺服器:  nsztm1.digi.ninja
Address:  167.88.42.94

> ls -d zonetransfer.me
[nsztm1.digi.ninja]
 zonetransfer.me.               SOA    nsztm1.digi.ninja robin.digi.ninja. (2014
101501 172800 900 1209600 3600)
 zonetransfer.me.               TXT            "google-site-verification=tyP28J
7JAUHA9fw2sHXMgcCC0I6XBmmoVi04VlMewxA"

 zonetransfer.me.               MX     0    ASPMX.L.GOOGLE.COM
 zonetransfer.me.               MX     10   ALT1.ASPMX.L.GOOGLE.COM
 zonetransfer.me.               MX     10   ALT2.ASPMX.L.GOOGLE.COM
 zonetransfer.me.               MX     20   ASPMX2.GOOGLEMAIL.COM
 zonetransfer.me.               MX     20   ASPMX3.GOOGLEMAIL.COM
 zonetransfer.me.               MX     20   ASPMX4.GOOGLEMAIL.COM
 zonetransfer.me.               MX     20   ASPMX5.GOOGLEMAIL.COM
 zonetransfer.me.               A      217.147.180.162
 zonetransfer.me.               NS     nsztm1.digi.ninja
 zonetransfer.me.               NS     nsztm2.digi.ninja
 _sip._tcp                      SRV    priority=0, weight=0, port=5060, www.zone
transfer.me
 164.180.147.217.IN-ADDR.ARPA   PTR    www.zonetransfer.me
 asfdbauthdns                   AFSDB  1    asfdbbox.zonetransfer.me
 asfdbbox                       A      127.0.0.1
 asfdbvolume                    AFSDB  1    asfdbbox.zonetransfer.me
 canberra-office                A      202.14.81.230
```

dnsmap

- Dnsmap 是一個專門收集 subdomain 資訊的工具 。
- Example:
  - dnsmap naver.com

```
root@kaliX201:~# dnsmap naver.com -r ./dns_naver_results.txt
dnsmap 0.30 - DNS Network Mapper by pagvac (gnucitizen.org)

[+] searching (sub)domains for naver.com using built-in wordlist
[+] using maximum random delay of 10 millisecond(s) between requests

ad.naver.com
IP address #1: 103.6.174.8
IP address #2: 103.6.174.7

ax.naver.com
IP address #1: 111.91.132.22

beta.naver.com
IP address #1: 112.175.153.78
```

https://code.google.com/p/dnsmap/

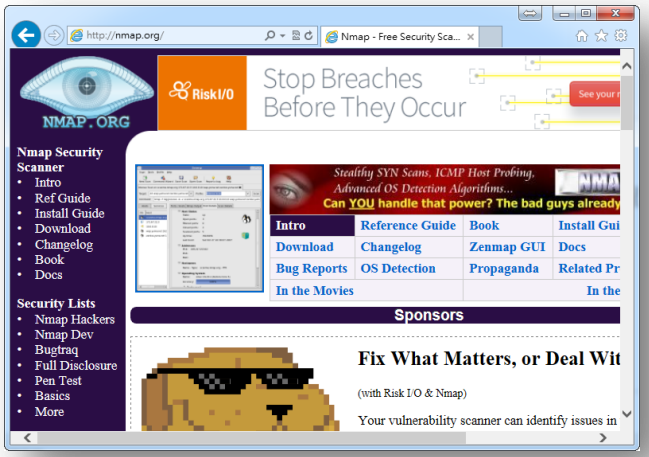
dnswalk

- dnswalk是一個可以測試你的dns 是否有zone transfer 的小工具。
- Example:
  - dnswalk abc.om.

```
root@kaliX201:~# dnswalk
defined(@array) is deprecated at /usr/bin/dnswalk line 61.
        (Maybe you should just omit the defined()?)
Usage: dnswalk domain
domain MUST end with a '.'
root@kaliX201:~# dnswalk ocu.edu.tw.
defined(@array) is deprecated at /usr/bin/dnswalk line 61.
        (Maybe you should just omit the defined()?)
Checking ocu.edu.tw.
Getting zone transfer of ocu.edu.tw. from ns01.ocu.edu.tw...done.
SOA=ns01.ocu.edu.tw     contact=root.rs2.ocu.edu.tw
BAD: bi.ocu.edu.tw NS dns.bi.ocu.edu.tw: unknown host
WARN: cloud-01.ocu.edu.tw A 10.8.11.1: no PTR record
WARN: cloud-02.ocu.edu.tw A 10.8.11.2: no PTR record
WARN: cloud-03.ocu.edu.tw A 10.8.11.3: no PTR record
```

網路與主機掃瞄-Nmap

- Nmap是由Fyodor Vaskovich所開發的一套開放原始碼軟體
- Nmap主要用於針對本機或遠端主機進行網路連接埠、應用程式類別、作業系統版本...等電腦資訊。
- Zenmap是nmap的圖形化介面版本

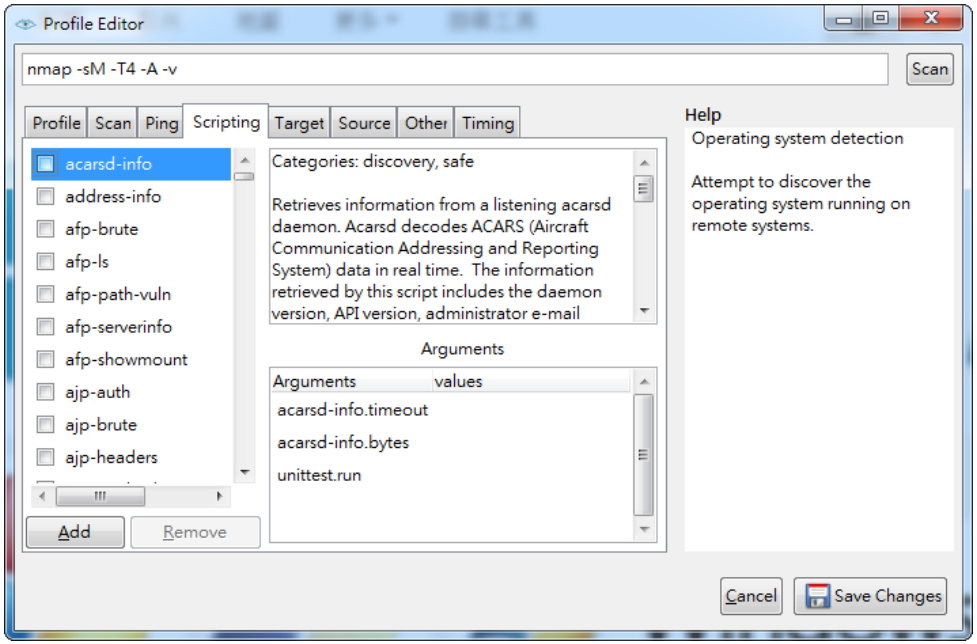


網路與主機掃瞄-Nmap

- 指令介紹：
  - -sT 掃描已建立的TCP 連線
  - -sS 掃描標示為SYN的TCP封包
  - -sA 透過Ping的方式進行掃描
  - -P 指定連接埠的掃描範圍
  - -A 顯示操作系統與應用程式版本 (-Sv -O)
  - -v 顯示詳細資訊

Nmap NSE Script

- Nmap的腳本引擎 ，是目前Nmap的最強大的特色，藉由執行這些腳本可以完成各種各樣的自動化任務 。
- 使用者本身也可以撰寫自己所需要的腳本，來滿足任務的需求。



網路與主機掃瞄-Nmap

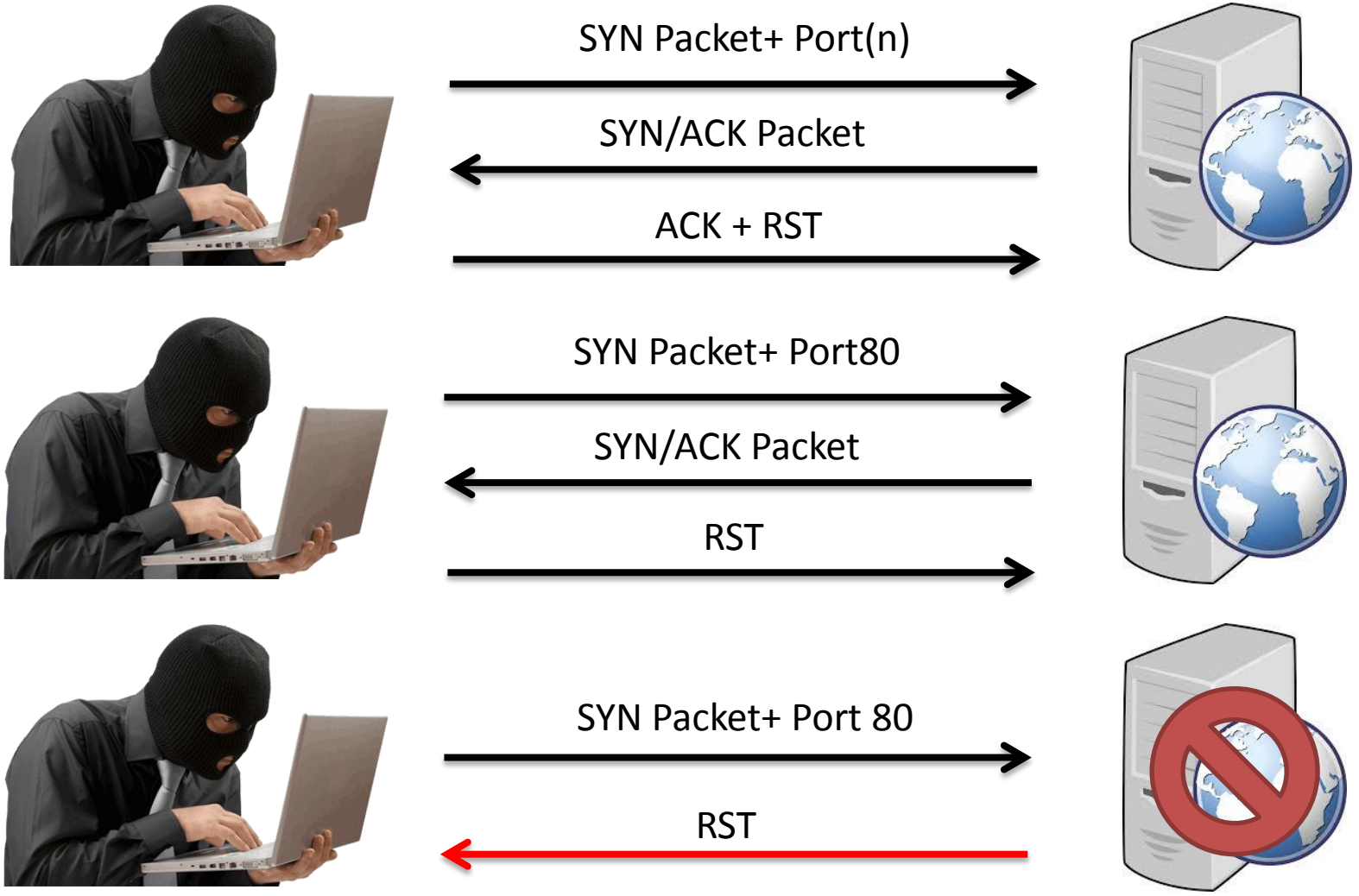
- nmap –A 127.0.0.1

```
root@kali:~# nmap -A 192.168.195.134

Starting Nmap 6.40 ( http://nmap.org ) at 2013-11-15 14:56 CST
Nmap scan report for 192.168.195.134
Host is up (0.00033s latency).
Not shown: 977 closed ports
PORT     STATE SERVICE     VERSION
21/tcp   open  ftp         vsftpd 2.3.4
|_ftp-anon: Anonymous FTP login allowed (FTP code 230)
22/tcp   open  ssh         OpenSSH 4.7p1 Debian 8ubuntu1 (protocol 2.0)
| ssh-hostkey: 1024 60:0f:cf:e1:c0:5f:6a:74:d6:90:24:fa:c4:d5:6c:cd (DSA)
|_2048 56:56:24:0f:21:1d:de:a7:2b:ae:61:b1:24:3d:e8:f3 (RSA)
23/tcp   open  telnet      Linux telnetd
25/tcp   open  smtp        Postfix smtpd
|_smtp-commands: metasploitable.localdomain, PIPELINING, SIZE 10240000, VRFY, ETRN,
| ssl-cert: Subject: commonName=ubuntu804-base.localdomain/organizationName=OCOSA/s
| Not valid before: 2010-03-17T14:07:45+00:00
|_Not valid after:  2010-04-16T14:07:45+00:00
|_ssl-date: 2013-11-15T06:54:18+00:00; -2m49s from local time.
53/tcp   open  domain      ISC BIND 9.4.2
| dns-nsid:
|_  bind.version: 9.4.2
80/tcp   open  http        Apache httpd 2.2.8 ((Ubuntu) DAV/2)
|_http-methods: No Allow or Public header in OPTIONS response (status code 200)
|_http-title: Metasploitable2 - Linux
111/tcp  open  rpcbind     2 (RPC #100000)
| rpcinfo:
|   program version   port/proto  service
|   100000  2            111/tcp  rpcbind
|   100000  2            111/udp  rpcbind
|   100003  2,3,4       2049/tcp  nfs
|   100003  2,3,4       2049/udp  nfs
|   100005  1,2,3      33418/udp  mountd
|   100005  1,2,3      47871/tcp  mountd
|   100021  1,3,4      32883/udp  nlockmgr
|   100021  1,3,4      37465/tcp  nlockmgr
```

NARLabs

TCP Connect /Full | Half Open Scan



NARLabs

Xmas / Fin Scan

FIN,URG,PUSH

NoResponse

RST

Flag=>URG,ACK,RST,SYN,FIN

FIN

NoResponse

RST/ACK

Flag=>FIN

Null / UDP Scan

Tcp Packet with No Flag Set

NoResponse

RST/ACK

Flag=> NO

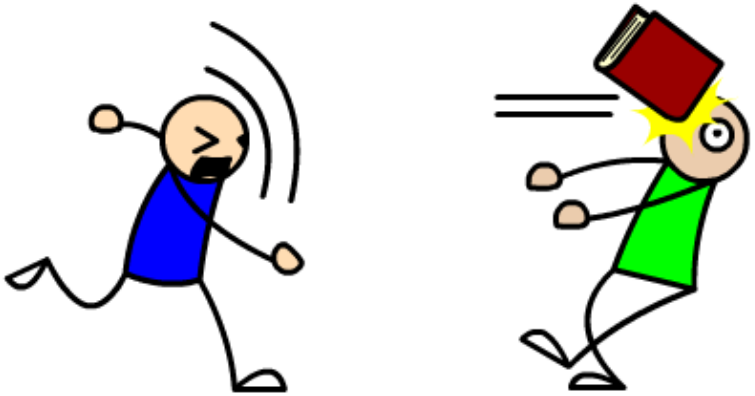
Open on UDP Port 20 ?

NoResponse, if port is Open

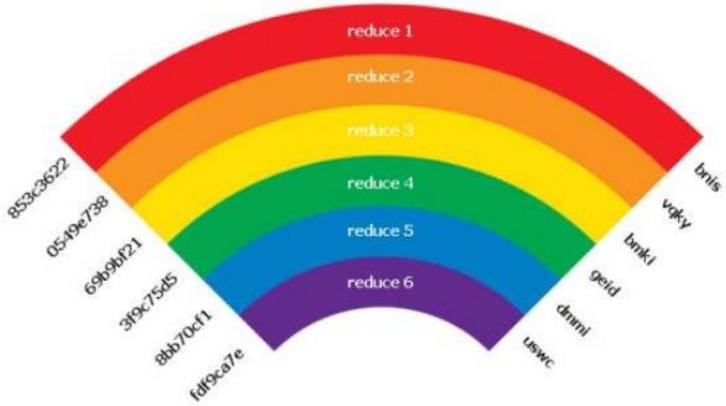
an icmp port unreachable

密碼破解

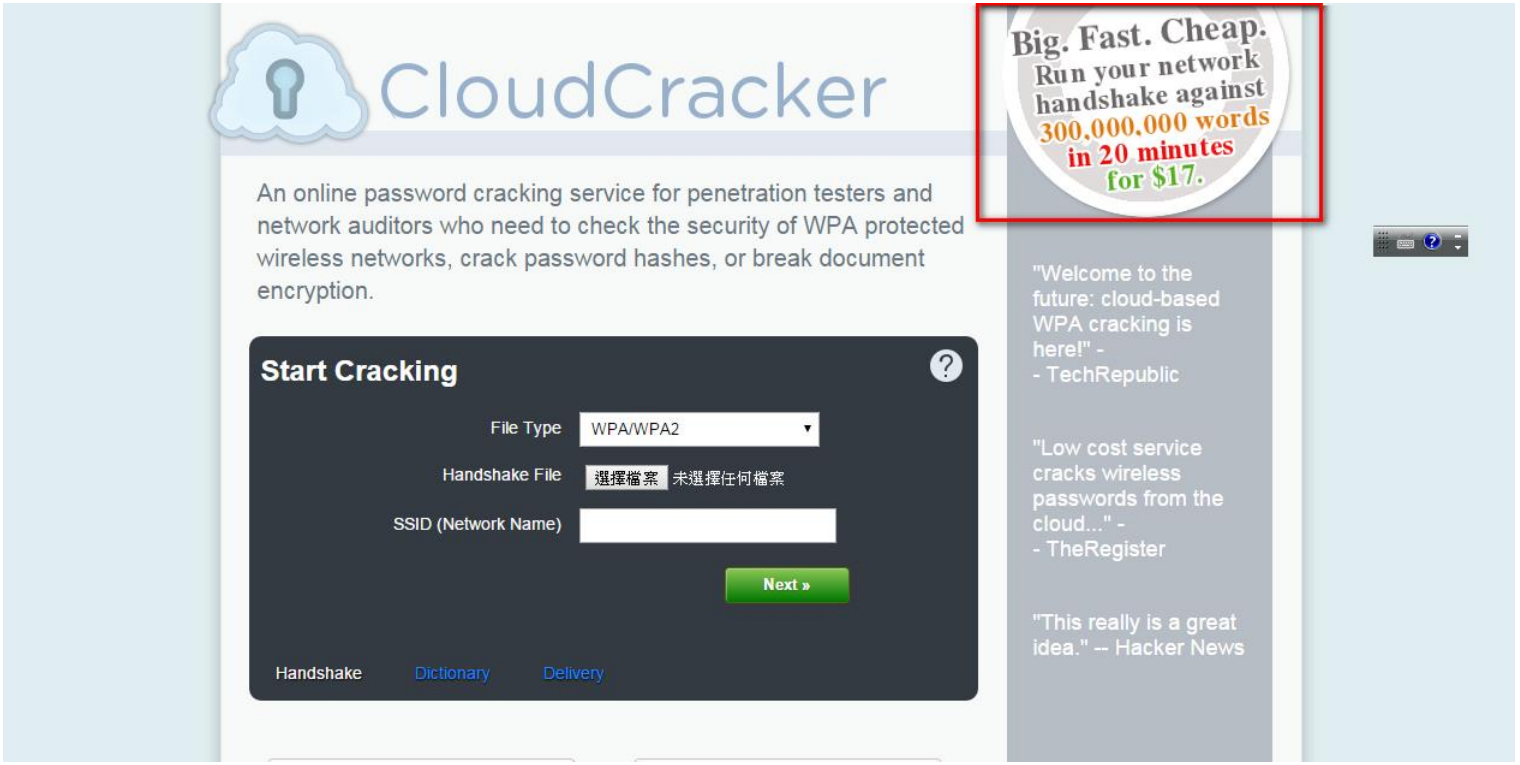
DICTIONARY ATTACK!



What is a Rainbow Table ?



當密碼上雲端



https://www.cloudcracker.com/

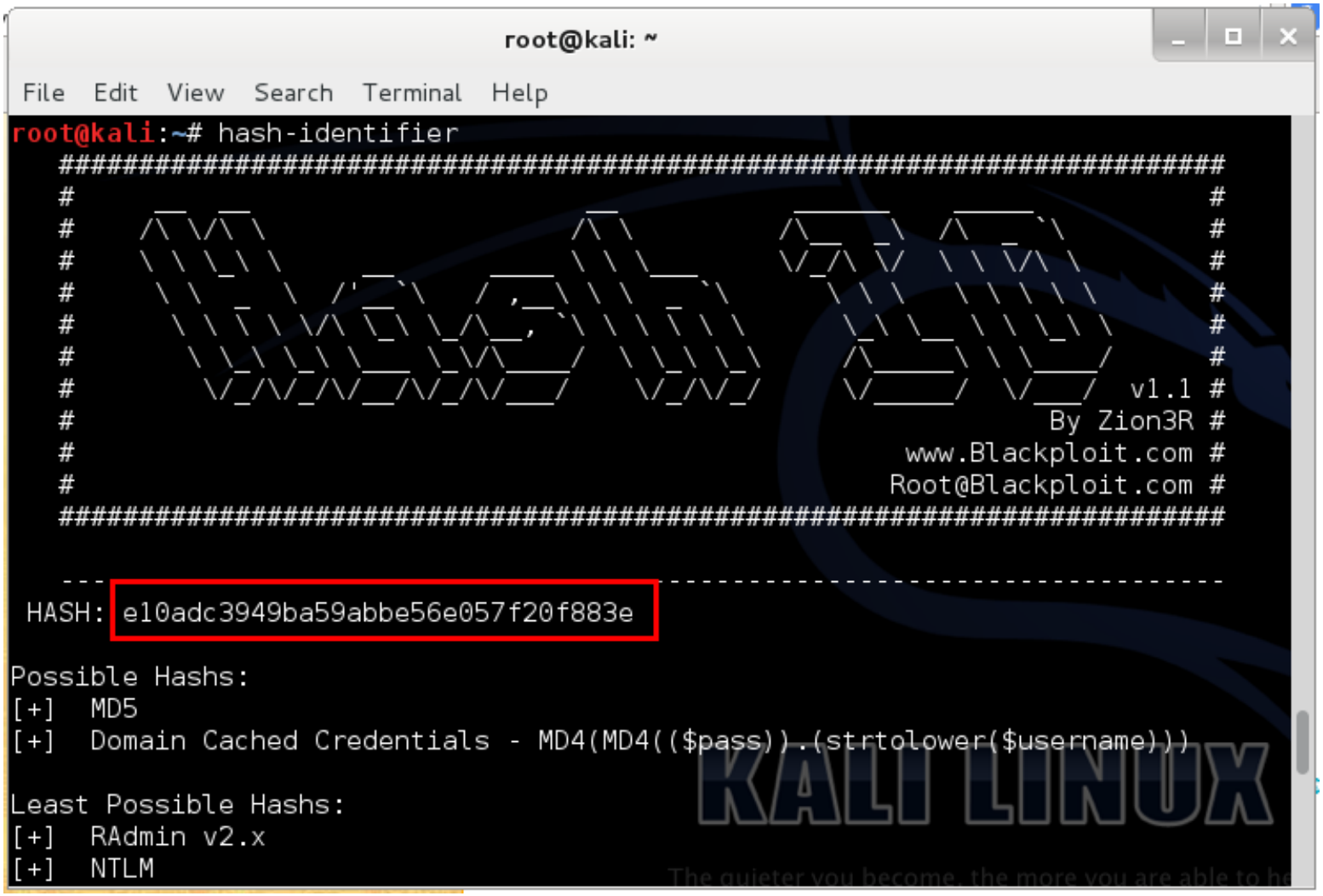
密碼與Gpu的火花

- Hashcat 一款可以支援Gpu運算來進行密碼的破解 ，本身可以運行在Windows與Linux 平台，必需搭配特定版本的顯示卡驅動程式，才可運行軟體。

hash-identifier

- 為blackploit 所開發維護，如同本身的名字一樣hash-identifier 可以幫助你快速了解，你所輸入的字串的加密類型。
- Encryption formats supported:
  - ADLER-32
  - CRC-32
  - CRC-32B
  - CRC-16
  - CRC-16-CCITT
  - DES(Unix)
  - FCS-16
  - ……

hash-identifier



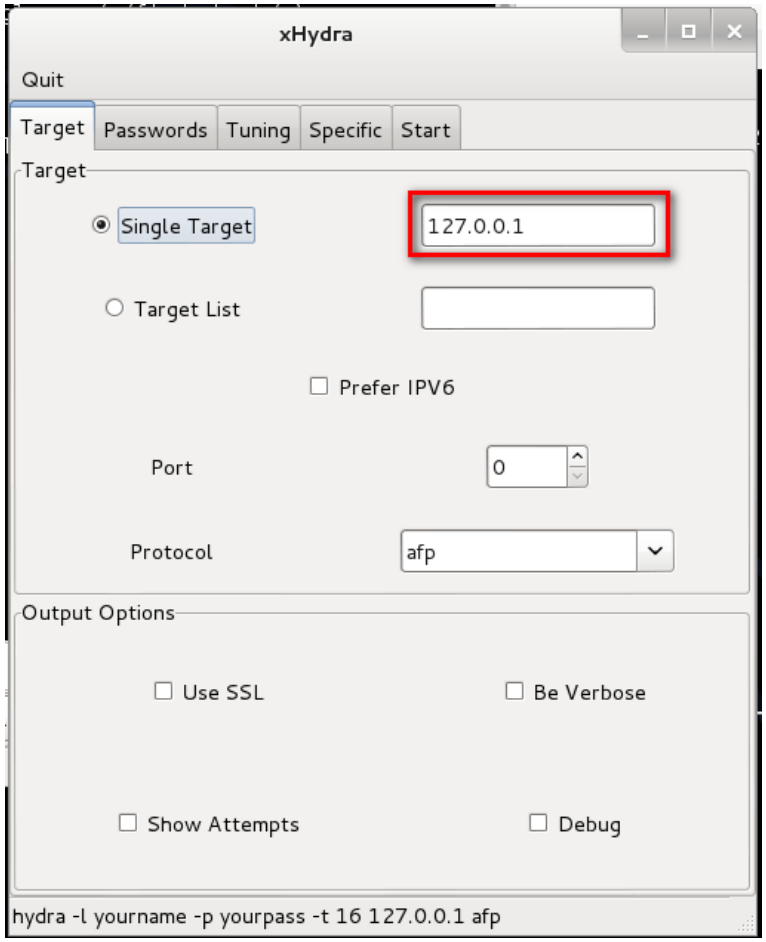
密碼破解

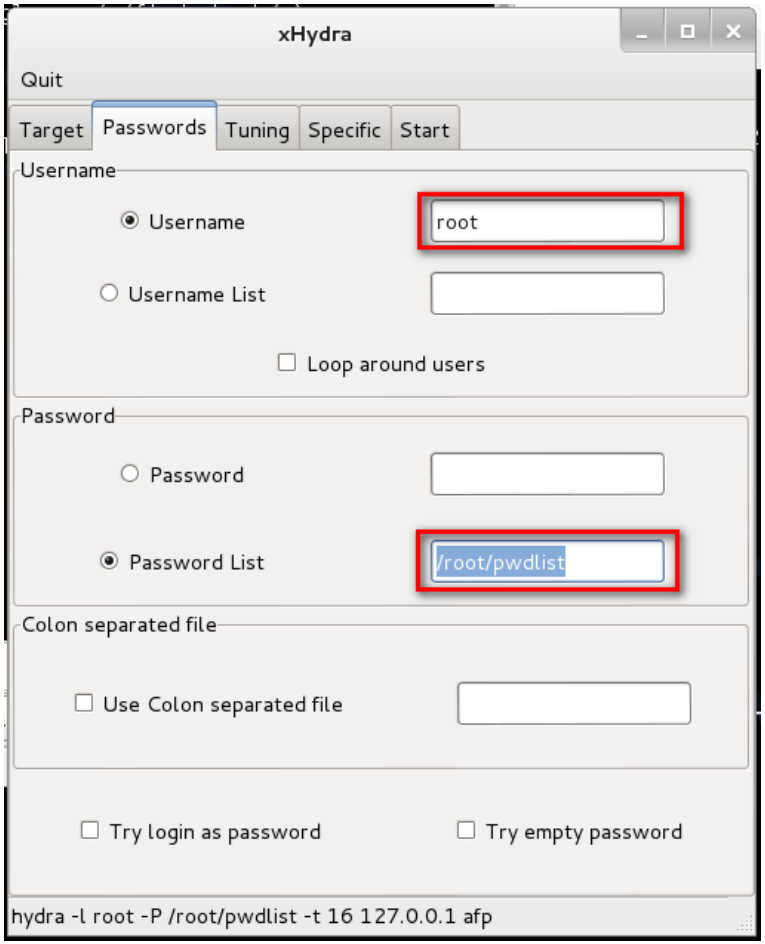
- Online Attack
  - Hydra
- Offline Attack
  - Johnny - GUI for John the Ripper

密碼破解- Hydra

- Hydra 一款密碼破解軟體，它支援許多種通訊協定，並時常更新新的模組。
- Hydra可以在Windows ,OSX, Linux 等環境下執行。

密碼破解- Hydra


xHydra
Quit
Target
Passwords
Tuning
Specific
Start
Target
Single Target
127.0.0.1
Target List
Prefer IPV6
Port
0
Protocol
afp
Output Options
Use SSL
Be Verbose
Show Attempts
Debug
hydra -l yourname -p yourpass -t 16 127.0.0.1 afp


xHydra
Quit
Target
Passwords
Tuning
Specific
Start
Username
Username
root
Username List
Loop around users
Password
Password
Password List
/root/pwdlist
Colon separated file
Use Colon separated file
Try login as password
Try empty password
hydra -l root -P /root/pwdlist -t 16 127.0.0.1 afp

NARLabs

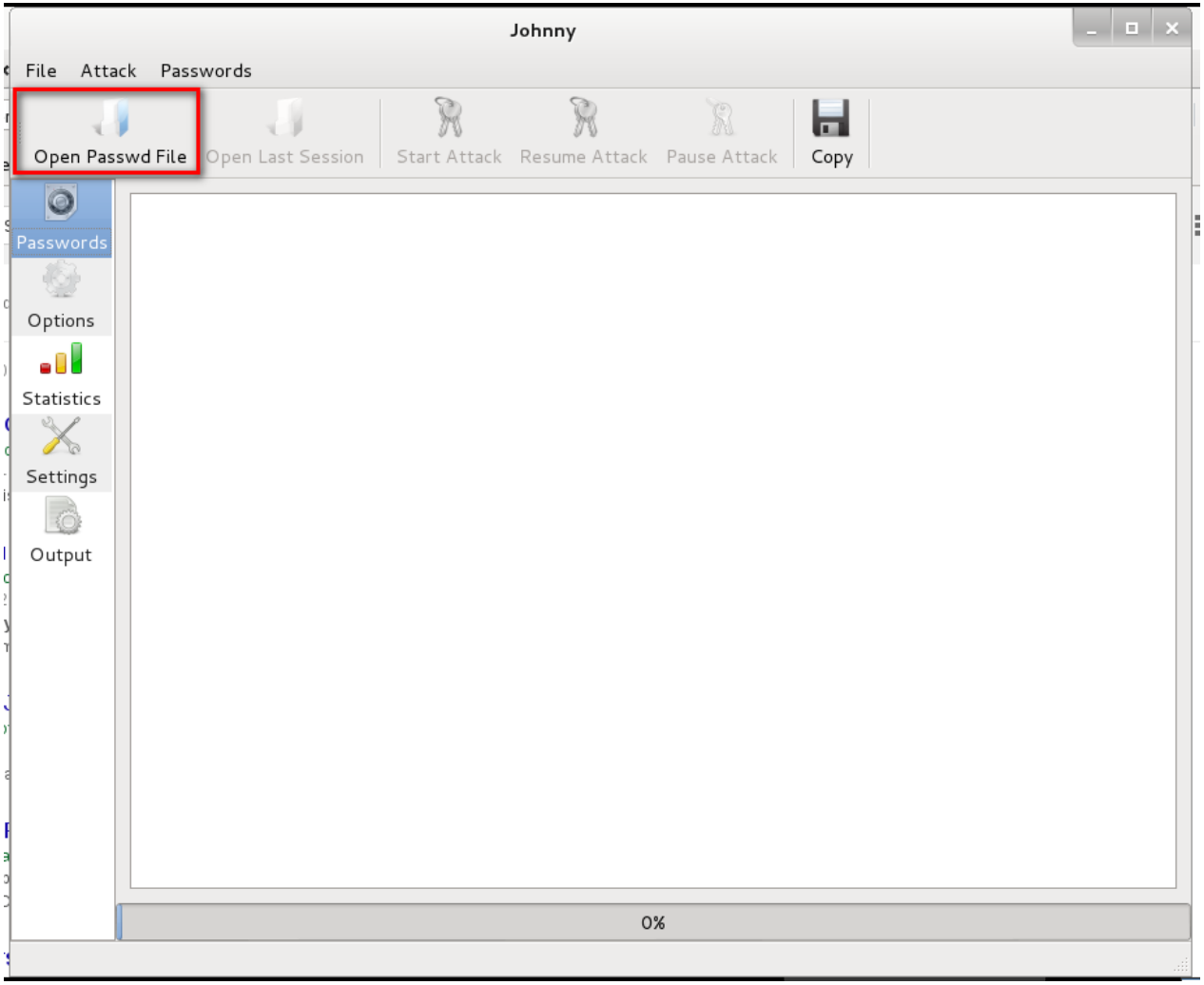
我的密碼在哪裡

- Windows 密碼檔?
  - C:\winnt\system32\config
- Linux密碼檔?
  - /etc/shadow

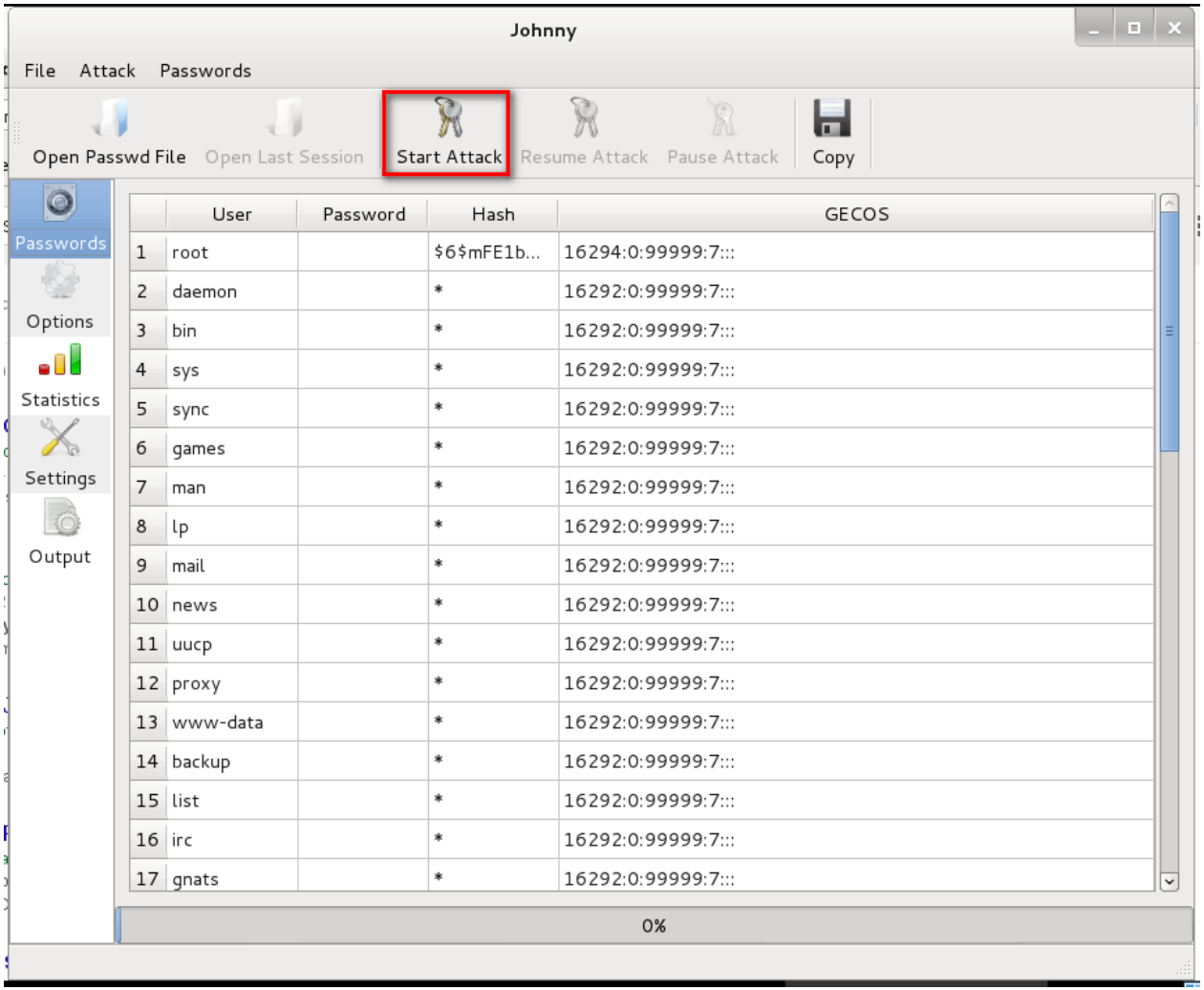
密碼破解-John the Ripper

- 一款Open Source的破解密碼軟體，是一個用於在已知密文的情況下嘗試破解出明文的破解密碼軟體，主要支源對DES、MD5 等加密方式的密文進行破解工作。

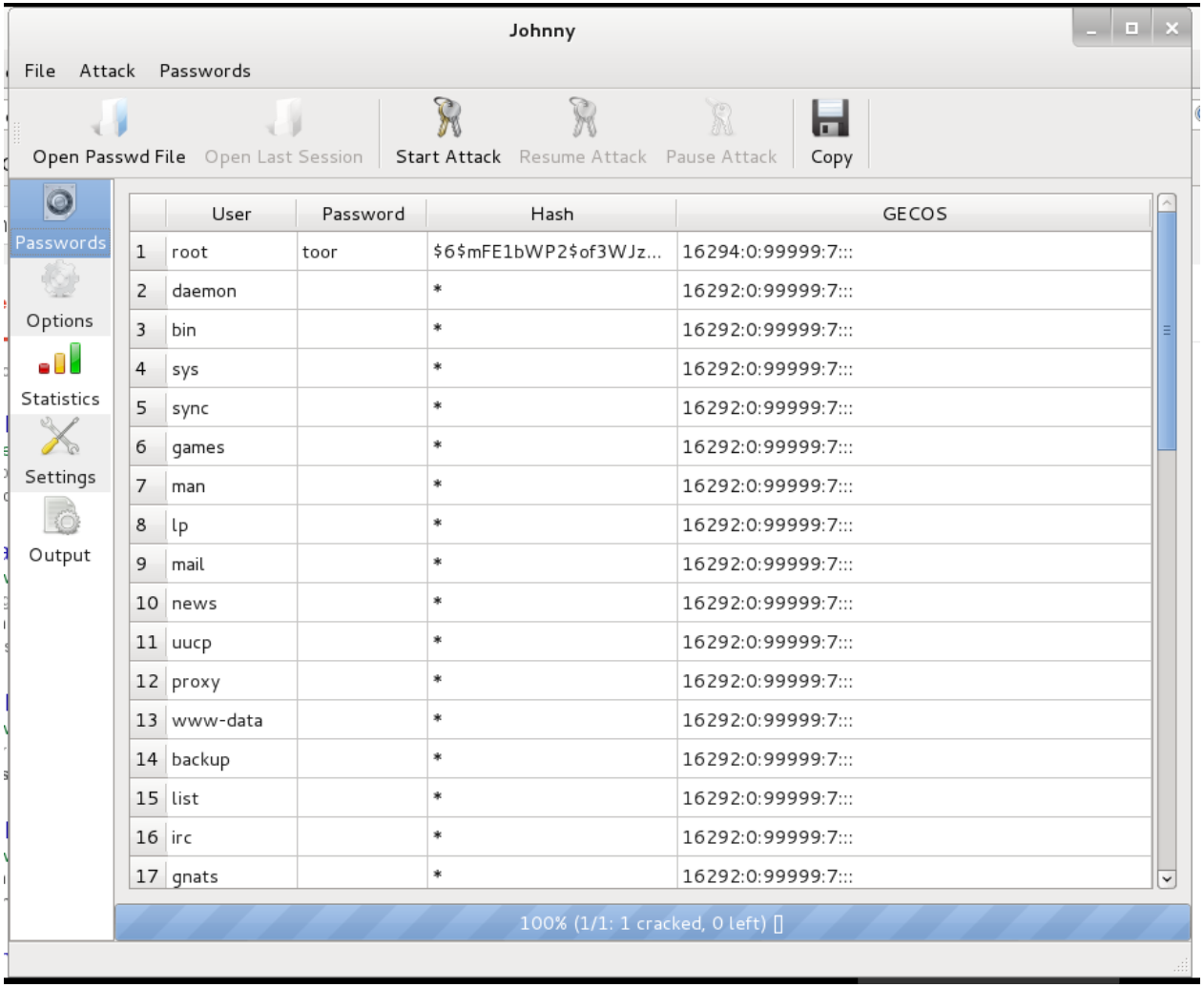
密碼破解-Johnny


Johnny
File
Attack
Passwords
Open Passwd File
Open Last Session
Start Attack
Resume Attack
Pause Attack
Copy
Passwords
Options
Statistics
Settings
Output
0%

密碼破解-Johnny


Johnny
File
Attack
Passwords
Open Passwd File
Open Last Session
Start Attack
Resume Attack
Pause Attack
Copy
Passwords
Options
Statistics
Settings
Output
User
Password
Hash
GECOS
1 root 6mFE1b... 16294:0:99999:7:::
2 daemon * 16292:0:99999:7:::
3 bin * 16292:0:99999:7:::
4 sys * 16292:0:99999:7:::
5 sync * 16292:0:99999:7:::
6 games * 16292:0:99999:7:::
7 man * 16292:0:99999:7:::
8 lp * 16292:0:99999:7:::
9 mail * 16292:0:99999:7:::
10 news * 16292:0:99999:7:::
11 uucp * 16292:0:99999:7:::
12 proxy * 16292:0:99999:7:::
13 www-data * 16292:0:99999:7:::
14 backup * 16292:0:99999:7:::
15 list * 16292:0:99999:7:::
16 irc * 16292:0:99999:7:::
17 gnats * 16292:0:99999:7:::
0%

密碼破解-Johnny


Johnny
File
Attack
Passwords
Open Passwd File
Open Last Session
Start Attack
Resume Attack
Pause Attack
Copy
Passwords
Options
Statistics
Settings
Output
User
Password
Hash
GECOS
1 root toor 6mFE1bWP2$of3WJz... 16294:0:99999:7:::
2 daemon * 16292:0:99999:7:::
3 bin * 16292:0:99999:7:::
4 sys * 16292:0:99999:7:::
5 sync * 16292:0:99999:7:::
6 games * 16292:0:99999:7:::
7 man * 16292:0:99999:7:::
8 lp * 16292:0:99999:7:::
9 mail * 16292:0:99999:7:::
10 news * 16292:0:99999:7:::
11 uucp * 16292:0:99999:7:::
12 proxy * 16292:0:99999:7:::
13 www-data * 16292:0:99999:7:::
14 backup * 16292:0:99999:7:::
15 list * 16292:0:99999:7:::
16 irc * 16292:0:99999:7:::
17 gnats * 16292:0:99999:7:::
100% (1/1: 1 cracked, 0 left)