



Is here again....

Chema Alonso

**Informática 64**

[www.informatica64.com](http://www.informatica64.com)

Previously on  
FOCA....



# FOCA 0.X



MetaExtractor

Archivo Pestañas Metadatos Opciones Sobre...

Windows 7 + Serve... Diez\_erroses\_que\_... 03texas.xls 04tb159a.xls w99tb101.xls

Codificación: Latin I  
Autor: Gonzalo  
Plantilla: Normal  
Última vez guardado por: Chema  
Revisión: 8  
Aplicación: Microsoft Office Word  
Tiempo de edición: 00:38:00  
Fecha de creación: 11/10/2009 10:54:00  
Última vez guardado: 13/10/2009 11:42:00  
Páginas: 2  
Palabras: 682  
Carácteres: 3757  
Compañía: Neurocrypt  
Lineas: 31  
Párrafos: 8  
SO: Windows 7

# What kind of data can be found?



- Metadata:
  - Information stored to give information about the document.
    - For example: Creator, Organization, etc..
- Hidden information:
  - Information internally stored by programs and not editable.
    - For example: Template paths, Printers, db structure, etc...
- Lost data:
  - Information which is in documents due to human mistakes or negligence, because it was not intended to be there.
    - For example: Links to internal servers, data hidden by format, etc...

# Metadata Risks



- “Secret” relationships
  - Government & companies
  - Companies & providers
- Piracy
- Reputation
- Social engineering attacks
- Targeting Malware

# 2003 – MS Word bytes Tony Blair



## Microsoft Word bytes Tony Blair in the butt

---

[Home](#) > [Privacy](#) > [Blair's Iraq Dossier](#)

Richard M. Smith ([rms@computerbytesman.com](mailto:rms@computerbytesman.com))  
June 30, 2003

Microsoft Word documents are notorious for containing private information in file headers which people would sometimes rather not share. The hard way.

Back in February 2003, 10 Downing Street published a dossier on Iraq's security and intelligence organizations. This dossier was cited by Colin Dr. Glen Rangwala, a lecturer in politics at Cambridge University, quickly discovered that much of the material in the dossier was actually plagiarized.

You can read Dr. Rangwala's original analysis of the dossier from Feb. 5, 2003 at this URL:

<http://www.casi.org.uk/discuss/2003/msg00457.html>

Blair's government made one additional mistake: they published the dossier as a Microsoft Word file on their Web site. When I first heard from I had worked on the document. I downloaded the Word file containing the dossier from the 10 Downing Street Web site (<http://www.number-10>).

```
Rev. #1: "cic22" edited file "C:\DOCUME~1\phamill\LOCALS~1\Temp\AutoRecovery save of Iraq - security.asd"
Rev. #2: "cic22" edited file "C:\DOCUME~1\phamill\LOCALS~1\Temp\AutoRecovery save of Iraq - security.asd"
Rev. #3: "cic22" edited file "C:\DOCUME~1\phamill\LOCALS~1\Temp\AutoRecovery save of Iraq - security.asd"
Rev. #4: "JPratt" edited file "C:\TEMP\Iraq - security.doc"
Rev. #5: "JPratt" edited file "A:\Iraq - security.doc"
Rev. #6: "ablackshaw" edited file "C:\ABlackshaw\Iraq - security.doc"
Rev. #7: "ablackshaw" edited file "C:\ABlackshaw\A;Iraq - security.doc"
Rev. #8: "ablackshaw" edited file "A:\Iraq - security.doc"
Rev. #9: "MKhan" edited file "C:\TEMP\Iraq - security.doc"
Rev. #10: "MKhan" edited file "C:\WINNT\Profiles\mkhan\Desktop\Iraq.doc"
```

# Targeting Malware



## Pentagon breached by foreign hacker




A foreign spy agency carried out the most serious "cyber attack" on the US military's networks when a tainted flash drive was inserted into a laptop in the Middle East, according to a senior Pentagon official.

By Alex Spillius, Washington

Published: 9:43PM BST 26 Aug 2010





The Pentagon faces regular cyber attacks Photo: GETTY

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Email |  Print

Text Size  

USA 

News 

World News 

North America 

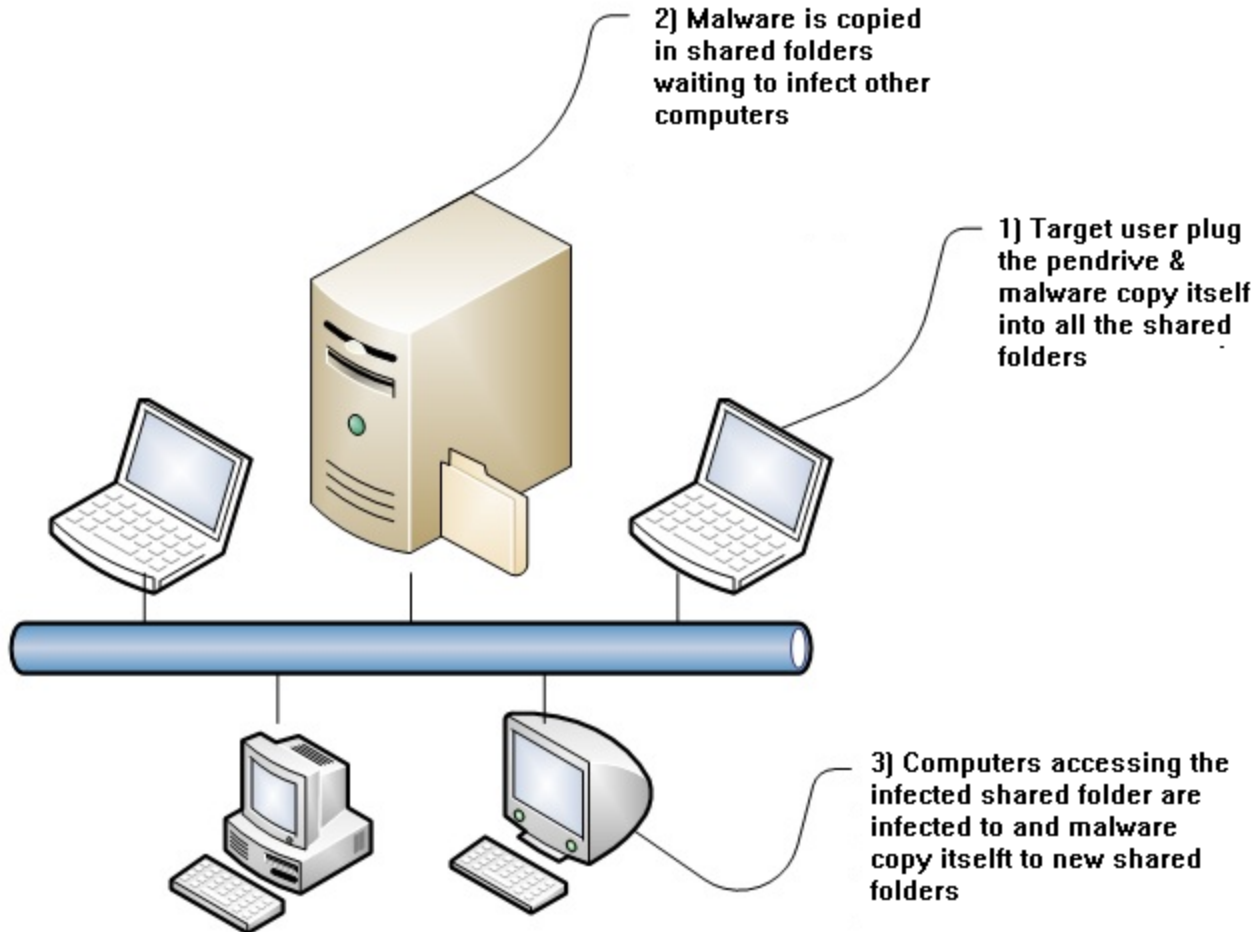
Ads by Google

World News

Cyber Espionage

Obama

# Targeting Malware





# Electing the entry point



File Metadata

Metadata Network

PCs/Servers Domains

Servers (14)

- Unlocated Servers
- APOLLO
- FOLTA
  - Folders
  - Users with access

Attribute

Users with access

John Vera

borton

DSIC User

DSIC

Nom Hensley

Preferred Customer

Folders

- \\CPSTEAM\Joint Study - BMDO Support Contract Overview\BSSP\BARBB Updates\JAN 04th Update\
- \\CPSTEAM\Joint Study - BMDO Support Contract Overview\BSSP\BARBB Updates\JAN 8th Update\
- \\CPSTEAM\Joint Study - BMDO Support Contract Overview\BSSP\BARBB Updates\JAN 12th Update\
- \\CPSTEAM\Joint Study - BMDO Support Contract Overview\BSSP\BARBB Updates\JAN 16h Update\
- \\CPSTEAM\Joint Study - BMDO Support Contract Overview\BSSP\BARBB Updates\JAN 25th Update\
- \\CPSTEAM\Joint Study - BMDO Support Contract Overview\BSSP\
- \\CPSTEAM\Joint Study - BMDO Support Contract Overview\BSSP\BARBB Updates\JAN 23rd Update\
- \\BMDO\shared\cpsteam\Paperless Project (Karen Reuter's)\Barbb Update\
- \\BMDO\shared\cpsteam\Paperless Project (Karen Reuter's)\RFP Sections L&M\Section L Attachments\
- \\BMDO\shared\cpsteam\Paperless Project (Karen Reuter's)\Barbb Update\Section L Attachments\
- \\CPSTEAM\Joint Study - BMDO Support Contract Overview\BSSP\BARBB Updates\DEC 12th Update\
- \\BMDO\shared\common\BMDO Misc July 2000 to-\
- \\CUSTOMERS\DSR Shared\BSSP USERS GUIDE\
- \\CPSTEAM\RAMOS SE&\RFP\Section J Attachments\
- \\CPSTEAM\RAMOS SE&\Final docs for review\Final RFP \_Extranet\
- \\CPSTEAM\RAMOS SE&\Model Contract\
- \\HENSLEY\
- \\BMDO\shared\cpsteam\Threat Systems Engineering (Countermeasures)\RFP\Section L Attachments\
- \\CPSTEAM\BSSP\BARBB Updates\FEB 21st Update\

on Report

Value
PC_Norm Hensley
Windows

# Social Engineering Attack



54 usuarios  
150.377

**ABCdatos**  
Programas y tutoriales  
que hablan tu idioma

Inicio Tus favoritos

PROGRAMAS TUTORIALES ZONA WEBMASTERS

FOCA Private 2.5

File Metadata Domain Enumeration Software Recognition Report Tools Logs Options About

Metadata Network data

Documents (1/1)  
pdf (1)  
guadalinux\_manual.pdf  
Users  
Dates  
Other Metadata  
Software

Metadata Summary  
Users (2)  
Folders (0)  
Printers (0)  
Software (1)  
Emails (0)  
Operating Systems (0)

Attribute	Value
<b>Users</b>	
Username	JosÃ© J. Grimaldos Parra
Username	José J. Grimaldos Parra
<b>Dates</b>	
Creation date	04/09/2003 11:35:00
Modified date	05/09/2003 8:57:30
<b>Other Metadata</b>	
Application	Acrobat Distillier 4.0
Keywords	Versión electrónica: Subprograma de NN.TT. CEC-JA
Title	Guadalinux, manual de uso
<b>Software</b>	
Acrobat Distillier 4.0	

All documents were analyzed

# Anonym0us case

# thing\_

Search

## Designer arrested over Anonymous press release

Nabbed by the properties

Written by [Paul Hales](#) on *15 December, 2010* [NEWS](#) > [WEB](#)



A bloke named Alex Tapanaris, whose name appeared on the **PDF press release** circulated by online trouble-makers Anonymous has had his web site disappeared from the web and, according to a post on [pastebin.com](#), the unfortunate chap has been arrested.

The release was circulated **last Friday** and pretty soon the document's properties were noticed.

Document Properties			
Description	Security	Fonts	Advanced
Description			
File:	ANONOPS_The_Press_Release.pdf		
Title:	<input type="text"/>		
Author:	Alex Tapanaris		

Spookily on Monday, Tapanaris' web site

# GPS information



KuvatON.com



EXIF data

Exif Version	0221
Color Space	1
Pixel Y Dimension	0
Date Time Original	2011:02:08 20:23:15
Date Time Digitized	2011:02:08 20:23:15
Exposure Time	1/10
F Number	2.8
Exposure Program	Normal program
ISO Speed Ratings	1000
Shutter Speed Value	3.3242976835879743
Aperture Value	2.970853573907009
Metering Mode	Average
Flash	No flash function
Subject Area	[4 values]
Focal Length	3.85
Sensing Method	One-chip color area sensor
White Balance	Auto white balance
Make	Apple
Model	iPhone 3GS

Tweet 0 Tykkää

Configure Close

# Lost Data



**Penetration Tester's Open Source Toolkit: 2**  
by [Chris Hurley](#)

32 us

**View:** [Front Cover](#) | [Table of Contents](#) | [Copyright](#) | [Excerpt](#) | [Index](#)

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KEY	SERIAL NUMBER
001	HJRTCV764
002	PO9873D5FG
003	829KM8NJH2
004	BAL923457U
005	CVPLQ6WQ23
006	VBP965T5T5
007	HJJJ863WD3E
008	2987GVTWMK
009	629MP55DJT
010	IMWQ295T6T

# FOCA: File types supported



- Office documents:
  - Open Office documents.
  - MS Office documents.
  - PDF Documents.
    - XMP.
  - EPS Documents.
  - Graphic documents.
    - EXIFF.
    - XMP.
  - Adobe Indesign, SVG, SVGZ (**NEW**)

# What can be found?



- Users:
  - Creators.
  - Modifiers .
  - Users in paths.
    - C:\Documents and settings\jfoo\myfile
    - /home/johnnyf
- Operating systems.
- Printers.
  - Local and remote.
- Paths.
  - Local and remote.
- Network info.
  - Shared Printers.
  - Shared Folders.
  - ACLS.
- Internal Servers.
  - NetBIOS Name.
  - Domain Name.
  - IP Address.
- Database structures.
  - Table names.
  - Colum names.
- Devices info.
  - Mobiles.
  - Photo cameras.
- Private Info.
  - Personal data.
- History of use.
- Software versions

Demo:  
Single files





# Sample: FBI.gov



Google™   [Búsqueda avanzada](#)  
[Preferencias](#)

Buscar en:  la Web  páginas en español  páginas de España

La Web Resultados 1 - 10 de aproximadamente **2.190 de filetype:xls en el dominio fbi.gov** (0,16 segundos)

Google™   [Búsqueda avanzada](#)  
[Preferencias](#)

Buscar en:  la Web  páginas en español  páginas de España

La Web Resultados 1 - 10 de aproximadamente **161 de filetype:doc en el dominio fbi.gov** (0,15 segundos)

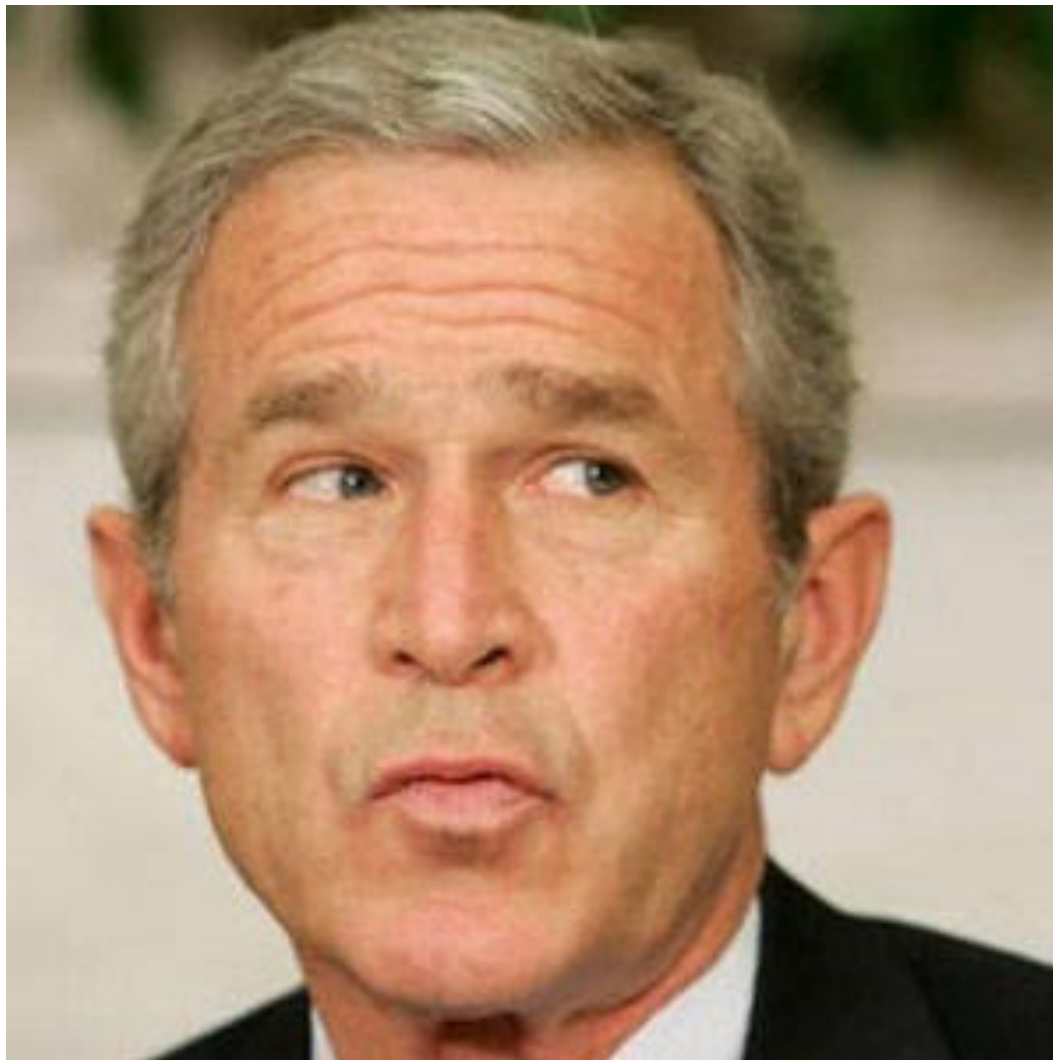
Google™   [Búsqueda avanzada](#)  
[Preferencias](#)

Buscar en:  la Web  páginas en español  páginas de España

La Web Resultados 1 - 10 de aproximadamente **2.490 de filetype:pdf en el dominio fbi.gov** (0,17 segundos)

**Total: 4841 files**

Are they cleaned?



# Metadata in Search Engines



site:fbi.gov intitle:"Documents" filetype:pdf

Buscar

Buscar en:  la Web  páginas en español  páginas de España

la Web

⌘ C:\Documents and Settings\mdrewniak\Local Settings\Temporary ... - [ Traducir este documento de archivo: PDF/Adobe Acrobat - [Versión en HTML](#)  
United States Department of Justice. U.S. Attorney, District of New Jersey. 970 Broad Street, Seventh Floor. Newark, New Jersey 07102 ...  
[www.fbi.gov/dojpressrel/2008/nk112408.pdf](http://www.fbi.gov/dojpressrel/2008/nk112408.pdf) - [Páginas similares](#)

⌘ C:\Documents and Settings\TCalloway\Local Settings\Temporary ... - [ Traducir este documento de archivo: PDF/Adobe Acrobat - [Versión en HTML](#)  
Members of the public are reminded that the indictment contains only charges. A defendant is presumed innocent of the charges and it will be the ...  
[www.fbi.gov/dojpressrel/pressrel08/onlineextortion100108.pdf](http://www.fbi.gov/dojpressrel/pressrel08/onlineextortion100108.pdf) - [Páginas similares](#)

⌘ C:\Documents and Settings\dwashington\Local Settings\Temporary ... - [ Traducir este documento de archivo: PDF/Adobe Acrobat - [Versión en HTML](#)  
United States Attorney. Southern District of New York. FOR IMMEDIATE RELEASE CONTACT U.S. ATTORNEY'S OFFICE. APRIL 20, 2004. MARVIN SMILON, HERBERT HADAD ...  
[www.fbi.gov/dojpressrel/pressrel04/drywall.pdf](http://www.fbi.gov/dojpressrel/pressrel04/drywall.pdf) - [Páginas similares](#)

⌘ C:\Documents and Settings\usagan-mmorgan\Desktop\PRESS RELEASE ... - [ Traducir este documento de archivo: PDF/Adobe Acrobat - [Versión en HTML](#)  
United States Attorney David E. Nahmias. Northern District of Georgia. FOR IMMEDIATE RELEASE CONTACT: Patrick Crosby, 06/19/08 (404)581-6016

# FOCA 1 v. RC3

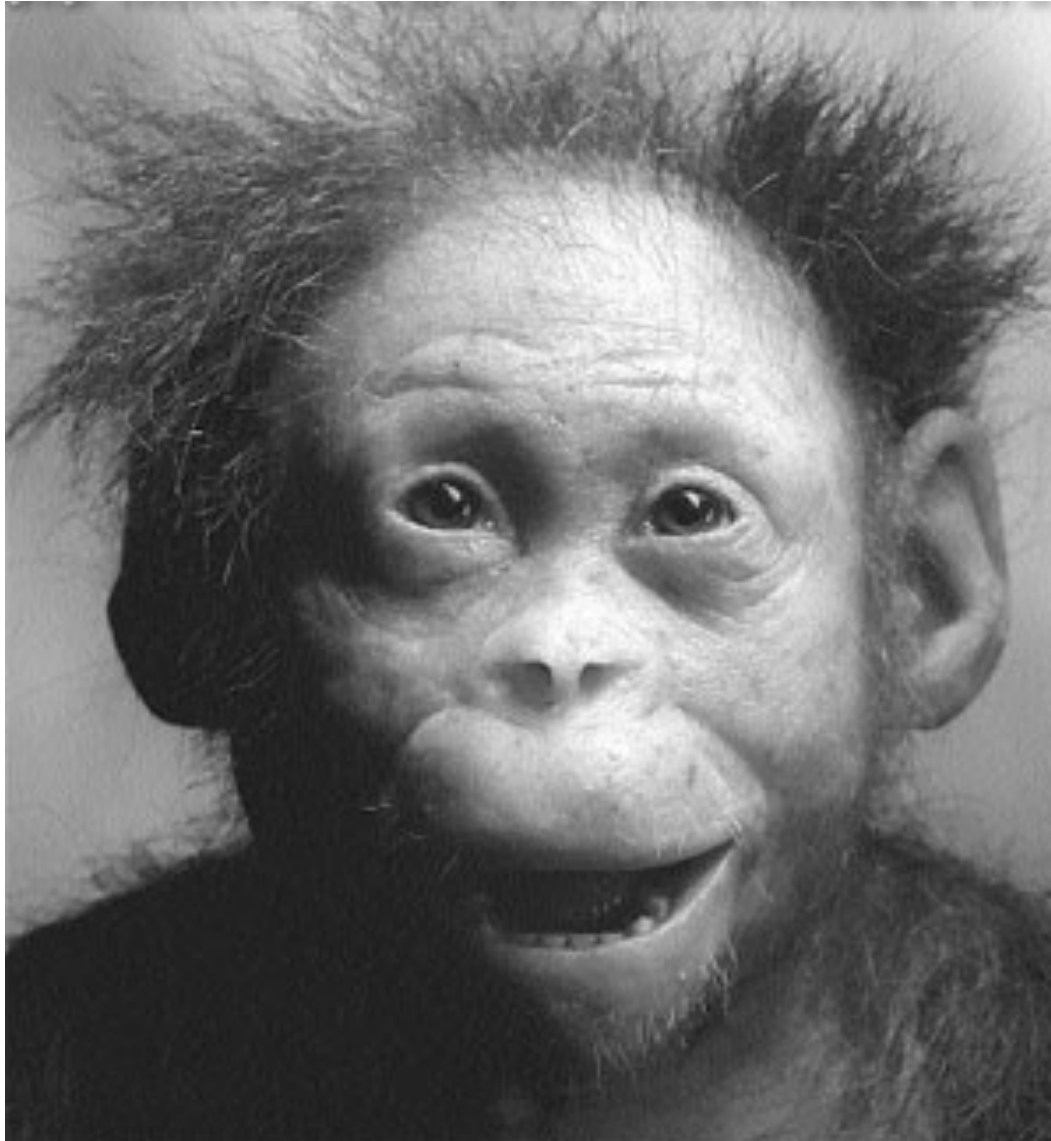


- Fingerprinting Organizations with Collected Archives
  - Search for documents in Google and Bing
  - Automatic file downloading
  - Capable of extracting Metadata, hidden info and lost data
  - Cluster information
  - Analyzes the info to fingerprint the network.

Demo:  
A lot of files



How many days to do the pentesting?



# Sometimes don't



**Warning!** The following unsecured FTP site is for temporary uploading and downloading of files for official government use only. Any other use is unauthorized. Use of this unsecured FTP site is at your own risk.

The U.S. Army Corps of Engineers, Mobile District, does not exercise any editorial control over the files and information you may find at this location.

<ftp://ftp.sam.usace.army.mil/>

<http://www.sam.usace.army.mil/en/Upload/FTPLink.html>

# FOCA 2.5

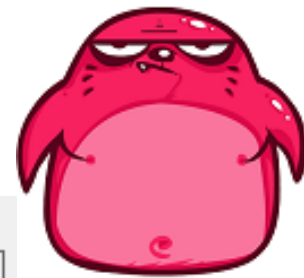


- Network Discovery
- Recursive algorithm
- Information Gathering
- Sw Recognition
- DNS Cache Snooping
- Reporting Tool





# DNS Search Panel



## Select search type

Web Searcher

DNS Search

Transfer Zone

Names Search

Google Sets

IP Bing

PTR Scanning

## Search IP in Bing

Bing allows search links located in a particular IP address.  
This functionality can be used to find domains that share IP Address.

Select the web search engine to use:

BingWeb

### Bing Web limitations

- Max 1000 results for each search
- Max 49 words in a search string

Current search: None

➡ Skip

✓ Start

# FOCA 2.5: Exalead



The image displays three screenshots of the FOCA Private 2.5 application interface, illustrating the search engine selection process. Each screenshot shows a window titled "whitehouse.gov - FOCA Private 2.5" with a menu bar (File, Metadata, Domain Enumeration, Software Recognition, Report, Tools, Logs, Options, About) and a sidebar with "Metadata" and "Network data" tabs. The main content area features the "FOCA" logo with the pink creature, a "Search engines" list, and an "Extensions" list. A "Search All" button is located at the bottom right of the main area.

**Screenshot 1 (Top):** Shows the "Search engines" list with "Google" selected. The "Documents" count is 0/332.

Search engines	Extensions
<input checked="" type="checkbox"/> Google	<input checked="" type="checkbox"/> doc <input checked="" type="checkbox"/> pptx <input checked="" type="checkbox"/> sxi <input checked="" type="checkbox"/> pdf

**Screenshot 2 (Middle):** Shows the "Search engines" list with "Google", "Bing", and "Exalead" selected. The "Documents" count is 0/2806.

Search engines	Extensions
<input checked="" type="checkbox"/> Google	<input checked="" type="checkbox"/> doc <input checked="" type="checkbox"/> pptx <input checked="" type="checkbox"/> sxi <input checked="" type="checkbox"/> pdf
<input checked="" type="checkbox"/> Bing	<input checked="" type="checkbox"/> ppt <input checked="" type="checkbox"/> ppsx <input checked="" type="checkbox"/> odt <input checked="" type="checkbox"/> wpd
<input checked="" type="checkbox"/> Exalead	<input checked="" type="checkbox"/> pps <input checked="" type="checkbox"/> xlsx <input checked="" type="checkbox"/> ods <input checked="" type="checkbox"/> svg
	<input checked="" type="checkbox"/> xls <input checked="" type="checkbox"/> sxw <input checked="" type="checkbox"/> odg <input checked="" type="checkbox"/> svgz
	<input checked="" type="checkbox"/> docx <input checked="" type="checkbox"/> sxc <input checked="" type="checkbox"/> odp <input checked="" type="checkbox"/> indd

**Screenshot 3 (Bottom):** Shows the "Search engines" list with "Exalead" selected. The "Documents" count is 0/2312.

Search engines	Extensions
<input type="checkbox"/> Google	<input checked="" type="checkbox"/> doc <input checked="" type="checkbox"/> pptx <input checked="" type="checkbox"/> sxi <input checked="" type="checkbox"/> pdf
<input type="checkbox"/> Bing	<input checked="" type="checkbox"/> ppt <input checked="" type="checkbox"/> ppsx <input checked="" type="checkbox"/> odt <input checked="" type="checkbox"/> wpd
<input checked="" type="checkbox"/> Exalead	<input checked="" type="checkbox"/> pps <input checked="" type="checkbox"/> xlsx <input checked="" type="checkbox"/> ods <input checked="" type="checkbox"/> svg
	<input checked="" type="checkbox"/> xls <input checked="" type="checkbox"/> sxw <input checked="" type="checkbox"/> odg <input checked="" type="checkbox"/> svgz
	<input checked="" type="checkbox"/> docx <input checked="" type="checkbox"/> sxc <input checked="" type="checkbox"/> odp <input checked="" type="checkbox"/> indd

# Huge domains case



Google

site:army.mil

Buscar

regjeringen.no - FOCA Pro 2.6

File Metadata Domain Enumeration Software Recognition Report Tools Logs Options About

Network data Metadata

PCs/Servers Domains IPs Roles

Vulnerabilities

- regjeringen.no
  - Clients (0)
  - Servers (3)
    - 79.0.0.0
      - 79.171.0.0
        - 79.171.83.0
          - fremtidenshelsetjeneste
    - 81.0.0.0
      - 81.93.0.0
        - 81.93.171.0
          - beta.regjeringen.no [81.93.171.0]
      - 195.225.28.0
        - regjeringen.no [195.225.28.195]
    - Unlocated Servers

Attribute	Value
<b>Information</b>	
Name	fremtidenshelsetjeneste.regjeringen.no [79.171.83.180]
<b>Domains - Source</b>	
fremtidenshelsetjeneste.regjeringen.no	WebSearch, BingAPI [fremtidenshelsetjeneste.regjeringen.no]
<b>IP Addresses - Source</b>	
79.171.83.180	WebSearch, BingAPI [fremtidenshelsetjeneste.regjeringen.no]

Technology recognition | Crawling | Exploiting | **Files** | Log

Google  doc  xls  ppsx  sxc  ods  pdf  svgz

Bing  ppt  docx  xlsx  sxi  odg  wpd  indd

Exalead  pps  pptx  sxw  odt  odp  svg

All None

Domain: fremtidenshelsetjeneste.regjeringen.no

Files (0 found) | Folders (1 found) | **Documents published (0 found)** | Backups (0 found)

Directory Listing enabled (0 found) [PASIVE] | Methods on folders (0 found) [PASIVE]

Document

Searching subdomains of regjeringen.no in BingAPI

# DNS Search & Zone Transfer



- IP resolution
- Well-Known records
  - NS
  - TXT (SPF)
  - MX
  - SOA (Primary.master)
- Zone Transfer
- Dictionary search

# Network Discovery Algorithm



<http://apple1.sub.domain.com/~chema/dir/fil.doc>

- 1) http -> Web server
- 2) GET Banner HTTP
- 3) domain.com is a domain
- 4) Search NS, MX, SPF records for domain.com
- 5) sub.domain.com is a subdomain
- 6) Search NS, MX, SPF records for sub.domain.com
- 7) Try all the non verified servers on all new domains
  - 1) server01.domain.com
  - 2) server01.sub.domain.com
- 8) Apple1.sub.domain.com is a hostname
- 9) Try DNS Prediction (apple1) on all domains
- 10) Try Google Sets(apple1) on all domains

# Network Discovery Algorithm



<http://apple1.sub.domain.com/~chema/dir/fil.doc>

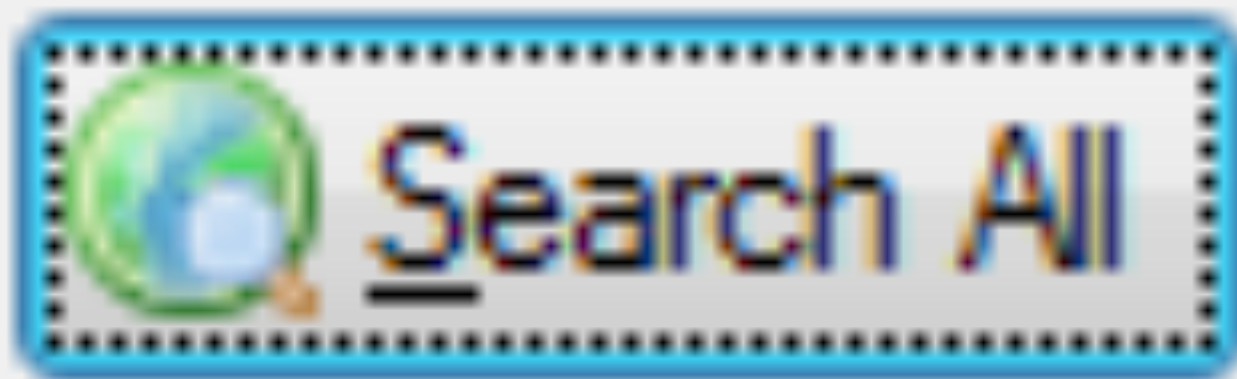
- 11) Resolve IP Address
- 12) Get Certificate in <https://IP>
- 13) Search for domain names in it
- 14) Get HTTP Banner of <http://IP>
- 15) Use Bing Ip:IP to find all domains sharing it
- 16) Repeat for every new domain
- 17) Connect to the internal NS (1 or all)
- 18) Perform a PTR Scan searching for internal servers
- 19) For every new IP discovered try Bing IP recursively
- 20) ~chema -> chema is probably a user

# Network Discovery Algorithm



<http://apple1.sub.domain.com/~chema/dir/fil.doc>

- 21) /, /~chema/ and /~chema/dir/ are paths
- 22) Try directory listing in all the paths
- 23) Search for PUT, DELETE, TRACE methods in every path
- 24) Fingerprint software from 404 error messages
- 25) Fingerprint software from application error messages
- 26) Try common names on all domains (dictionary)
- 27) Try Zone Transfer on all NS
- 28) Search for any URL indexed by web engines related to the hostname
- 29) Download the file
- 30) Extract the metadata, hidden info and lost data
- 31) Sort all this information and present it nicely
- 32) For every new IP/URL start over again





Demo:  
disa.mil



# Digital Certificates



Attribute	Value
Domain - Source	usacac.army.mil_140.153.167.60.crt
www.fcs.army.mil	Documents s usacac.leavenworth.army.mil_140.153.167.60.crt
IP Addresses - Source	usachppm.apgea.army.mil_phc.amedd.army.mil_140.153.167.60.crt
143.84.29.53	Documents s www.49thgrp.army.mil_www.49thgrp.army.mil.crt
FingerPrinting - HTTP	www.alt.army.mil_www.alt.army.mil.crt
Version	(Unavailable) www.apg.army.mil_www.apg.army.mil.crt
Version	(Unavailable) www.arl.army.mil_ess.arl.army.mil.crt
Version	(Unavailable) www.aw2.army.mil_www.aw2.army.mil.crt
	www.bands.army.mil_bands.army.mil.crt
	www.bctmod.army.mil_www.bctmod.army.mil.crt
	www.belvoir.army.mil_www.belvoir.army.mil.crt
	www.benning.army.mil_www.benning.army.mil.crt
	www.bliss.army.mil_www.bliss.army.mil.crt
	www.carlisle.army.mil_www.carlisle.army.mil.crt
	www.crdamc.amedd.army.mil_www.crdamc.amedd.army.mil.crt
	www.cs.amedd.army.mil_www.cs.amedd.army.mil.crt

18/09/2010 2:20 Certificado de resp 1 KB

### Certificado

General Detalles Ruta de certificación

Mostrar: <Todos>

Campo	Valor
Identificador de clave del titular	09 9f 63 38 ed b5 d1 f9 3d c0 ...
Acceso a la información de ...	[1]Acceso a información de au...
Puntos de distribución CRL	[1]Punto de distribución CRL: ...
Nombre alternativo del titular	Nombre DNS=www.bctmod.ar...
Directivas del certificado	[1]Directiva de certificado:Ide...
Uso de la clave	Firma digital, Cifrado de clave ...
Algoritmo de identificación	sha1
Huella digital	41 85 b4 h1 0a e0 e5 0h 9e d9

Nombre DNS=www.bctmod.army.mil  
Nombre DNS=www.fcs.army.mil

Editar propiedades... Copiar en archivo...

Información acerca de los [detalles del certificado](#)

Aceptar

Attribute	Value
Domain - Source	
www.bctmod.army.mil	FingerPrinting
IP Addresses - Source	
143.84.29.53	Documents search > DNS resolution [143.84.29.53]
FingerPrinting - HTTP	
Version	(Unavailable)
Version	Microsoft-IIS/6.0

# FOCA 2.5 URL Analysis



**Select search type**

FPrinting HTTP

FPrinting SMTP

FPrinting Shodan

Tech Recognition

**HTTP Fingerprinting**

Webserver fingerprinting based on

- Server banner
- 404 message error
- ASPX's responses

Options

Metadata DNS Search Network

Fingerprinting Technology Folders

- Pasive Fingerprinting on HTTP servers
- HTTP Fingerprinting to all servers
- Pasive Fingerprinting on SMTP servers
- SMTP Fingerprinting to all servers

Save Cancel

Options

Metadata DNS Search Network

Fingerprinting Technology Folders

Detect open folders when the next match is found

index of /

- Search automatically in each folder

Methods to search for

PUT.DELETE

- Search automatically in each folder

**If you check 'Search automatically', your computer will perform multiple connections to remote servers**

Save Cancel

Options

Metadata DNS Search Network

Fingerprinting Technology Folders

Technologies to be searched for

<input checked="" type="checkbox"/> asp	<input checked="" type="checkbox"/> pl
<input checked="" type="checkbox"/> aspx	<input checked="" type="checkbox"/> cfm
<input checked="" type="checkbox"/> asmx	<input checked="" type="checkbox"/> cgi
<input checked="" type="checkbox"/> do	
<input checked="" type="checkbox"/> php	
<input checked="" type="checkbox"/> nsf	
<input checked="" type="checkbox"/> jsp	
<input checked="" type="checkbox"/> swf	
<input checked="" type="checkbox"/> exe	

Select all  Unselect all  Search automatically

Save Cancel

# Unsecure Http Methods



```
C:\Windows\system32\cmd.exe
F:\SW\netcat>nc [redacted] 80
OPTIONS /WIFI HTTP/1.X
HTTP/1.1 200 OK
Date: Wed, 23 Jun 2010 07:41:01 GMT
Server: Apache/2.0.52 (Red Hat)
Allow: GET, HEAD, POST, PUT, DELETE, TRACE, OPTIONS
Content-Length: 0
Connection: close
Content-Type: text/plain; charset=iso-8859-1
Content-Language: es
```

# Search & Upload



apple.com - FOCA Private 2.5

File Metadata Domain Enumeration Software Recognition Report Tools Logs Options About

Metadata Network data

PCs/Servers Domains IPs

pdf.euro.apple.com  
phonehome.euro.apple.com  
phonehome1.euro.apple.com  
phonehome1-bge0.euro.appl  
phonehome1-bge1.euro.appl  
phonehome2.euro.apple.com  
phonehome2-bge0.euro.appl  
phonehome2-bge1.euro.appl  
phonehome3.euro.apple.com  
phonehome3-bge0.euro.appl  
phonehome3-bge1.euro.appl  
promo1r.euro.apple.com  
promo3r.euro.apple.com  
promo4r.euro.apple.com  
registration.euro.apple.com  
sew.euro.apple.com  
streaming.euro.apple.com  
time1.euro.apple.com  
time2.euro.apple.com  
webmail.euro.apple.com  
webmail-new.euro.apple.com  
euro-red.apple.com

Attribute	Value
<b>Domain - Source</b>	
pdf.euro.apple.com	Reverse resolution, scanning IP range of 17.72.133.58
<b>IP Addresses - Source</b>	
17.72.133.33	Reverse resolution, scanning IP range of 17.72.133.58 > DNS resolution [17.72.1...
<b>FingerPrinting - HTTP</b>	
Version	Apache/1.3.29 (Darwin) PHP/4.3.6
Version	Apache/1.3.29 (Darwin) PHP/4.3.6

Technology Recognition Google crawling Search open folders Search methods Minimize

Domain: pdf.euro.apple.com

Files (0 found) Folders (3 found) Documents published (8 found)

Open folders (0 found) [PASIVE] Methods on folders (2 found) [PASIVE]

Folder	Methods
http://pdf.euro.apple.com/	PUT
http://pdf.euro.apple.com/	DELETE

# Searching for Server-Side Technologies



The screenshot displays a web security tool interface with two main windows. The top window shows search results for the domain `pdf.euro.apple.com`. The 'Technology Recognition' and 'Google crawling' buttons are highlighted with a red box. Below the buttons, there are sections for 'Files (0 found)', 'Folders (3 found)', and 'Open folders (0 found) [PASIVE]'. A table lists the found folders:

Folder	Method
<code>http://pdf.euro.apple.com/</code>	PUT
<code>http://pdf.euro.apple.com/</code>	DELETE

The 'Options' dialog box is open, showing the 'Technology' tab. It lists 'Technologies to be searched for' with the following checked items:

- asp
- aspx
- asmx
- do
- php
- nsf
- jsp
- swf
- pl
- cfm
- cgi

The bottom window shows search results for the domain `www.25idl.army.mil`. It includes tabs for 'Technology recognition', 'Crawling', 'Exploiting', 'Search', and 'Log'. The 'Crawling' tab is active, showing 'Google crawling' and 'Bing crawling' buttons. The search results are categorized as follows:

- Files (345 found)
- Folders (49 found)
- Documents published (3 found)
- Backups (0 found)
- Directory Listing enabled (0 found) [PASIVE]
- Methods on folders (21 found) [PASIVE]
- Tech. asp (14 found)
- Tech. swf (4 found)

A table lists the found documents:

Document
<code>http://www.25idl.army.mil/hain_bio.doc</code>
<code>http://www.25idl.army.mil/1_27brown_bio.doc</code>
<code>http://www.25idl.army.mil/1_27higgs_bio.doc</code>

# FOCA 2.5 & Shodan



net:143.84.68.8

Options

Save this search

Results 1 - 1 of about 1 for net:143.84.

» Top countries

143.84.68.8

NetApp Data

Added on 27.

HTTP/1.0 200

Content-length

Via: 1.1 RIL

X-powered-by

X-aspnet-version

Server: Microsoft

Cache-control

Date: Fri,

Content-type

http://shodan.surtri.com/?q=net%3A143.84.68.0/24&f=json - Windows Internet Explorer

http://shodan.surtri.com/?q=net:143.84.68.0/24&f=json

```
{
  "matches": [
    {
      "ip": "143.84.68.8",
      "updated": "27.11.2009",
      "hostnames": [],
      "data": "HTTP/1.0 200 OK\r\nContent-length: 507367\r\nVia: 1.1 RIL-CTNOSC (NetCache NetApp/6.0.2P1)\r\nX-powered-by: ASP.NET\r\nX-aspnet-version: 2.0.50727\r\nServer: Microsoft-IIS/6.0\r\nCache-control: private\r\nDate: Fri, 27 Nov 2009 06:49:36 GMT\r\nContent-type: text/html; charset=utf-8\r\n\r\n"},
    {
      "ip": "143.84.68.5",
      "updated": "16.11.2009",
      "hostnames": [],
      "data": "HTTP/1.0 200 OK\r\nContent-length: 27789\r\nVia: 1.1 RIL-CTNOSC (NetCache NetApp/6.0.2P1)\r\nX-powered-by: VP1 IntraView, ASP.NET\r\nSet-cookie: ASP.NET_SessionId=fhlt0uaxmlndfvvcehq10n45; path=/\r\nX-aspnet-version: 1.1.4322\r\nServer: Microsoft-IIS/6.0\r\nCache-control: private\r\nDate: Mon, 16 Nov 2009 05:03:13 GMT\r\nContent-type: text/html; charset=utf-8\r\n\r\n"},
    ...
  ],
  "total": 2,
  "countries": [
    {
      "count": 4,
      "country": "United States"
    }
  ]
}
```

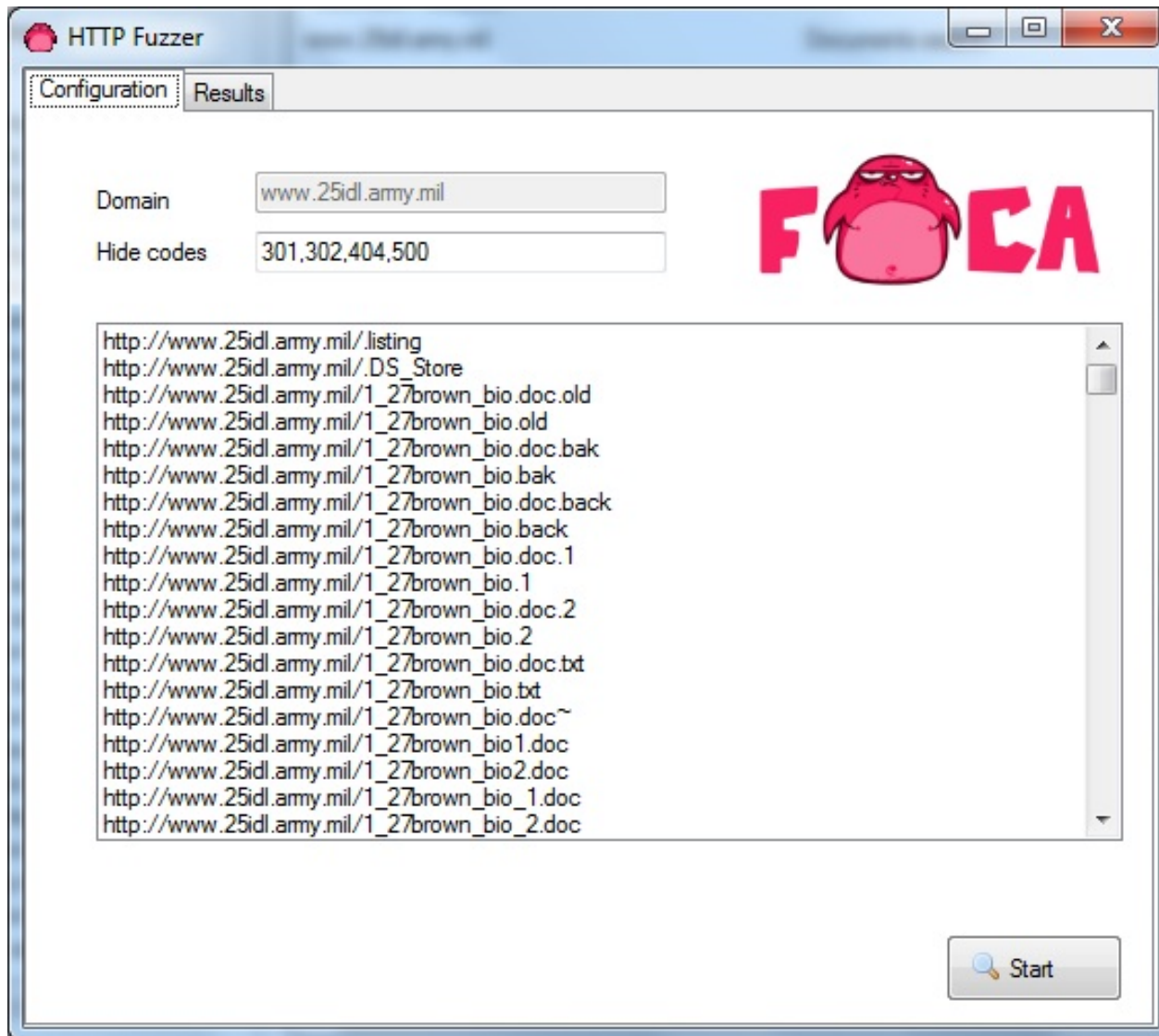
Listo Internet | Modo protegido: activado 100%

Demo:  
[whitehouse.gov](http://whitehouse.gov)





# Fuzzing options (PRO)





# DNS Cache Snooping



Domain:

File:

Dns:   
dns1.renfe.es  
dns2.renfe.es  
ns2.renfe.es

Cache

Host
Default
www.facebook.com
facebook.com
twitter.com
update.microsoft.com
www.periodistadigital.com
elladodelmal.blogspot.com
www.informatica64.com
megaupload.com

Monitor

Host	First	Last
Default		
www.facebook.com	15:55	15:55
facebook.com	15:55	15:55
twitter.com	15:55	15:55
update.microsoft.com	15:55	15:55
www.periodistadigital.com	15:55	15:55
elladodelmal.blogspot.com	15:55	15:55
www.informatica64.com	15:55	15:55
megaupload.com	15:55	15:55

Monitorice each 60 seconds

# DNS Cache Snooping



```
C:\>nslookup
Servidor predeterminado: UnKnown
Address: 192.168.1.1

> set type=ns
> renfe.es
Servidor: UnKnown
Address: 192.168.1.1

Respuesta no autoritativa:
renfe.es nameserver = dns1.renfe.es
renfe.es nameserver = dns2.renfe.es
renfe.es nameserver = ns1.renfe.es
renfe.es nameserver = ns2.renfe.es

dns1.renfe.es internet address = 213.144.49.35
dns2.renfe.es internet address = 213.144.49.43
ns1.renfe.es internet address = 213.144.33.254
> server ns1.renfe.es
Servidor predeterminado: ns1.renfe.es
Address: 213.144.33.254

> set type=a
> set norecuse
> www.facebook.com
Servidor: ns1.renfe.es
Address: 213.144.33.254

Respuesta no autoritativa:
Nombre: www.facebook.com
Address: 69.63.190.18

> elladodelmal.blogspot.com
Servidor: ns1.renfe.es
Address: 213.144.33.254

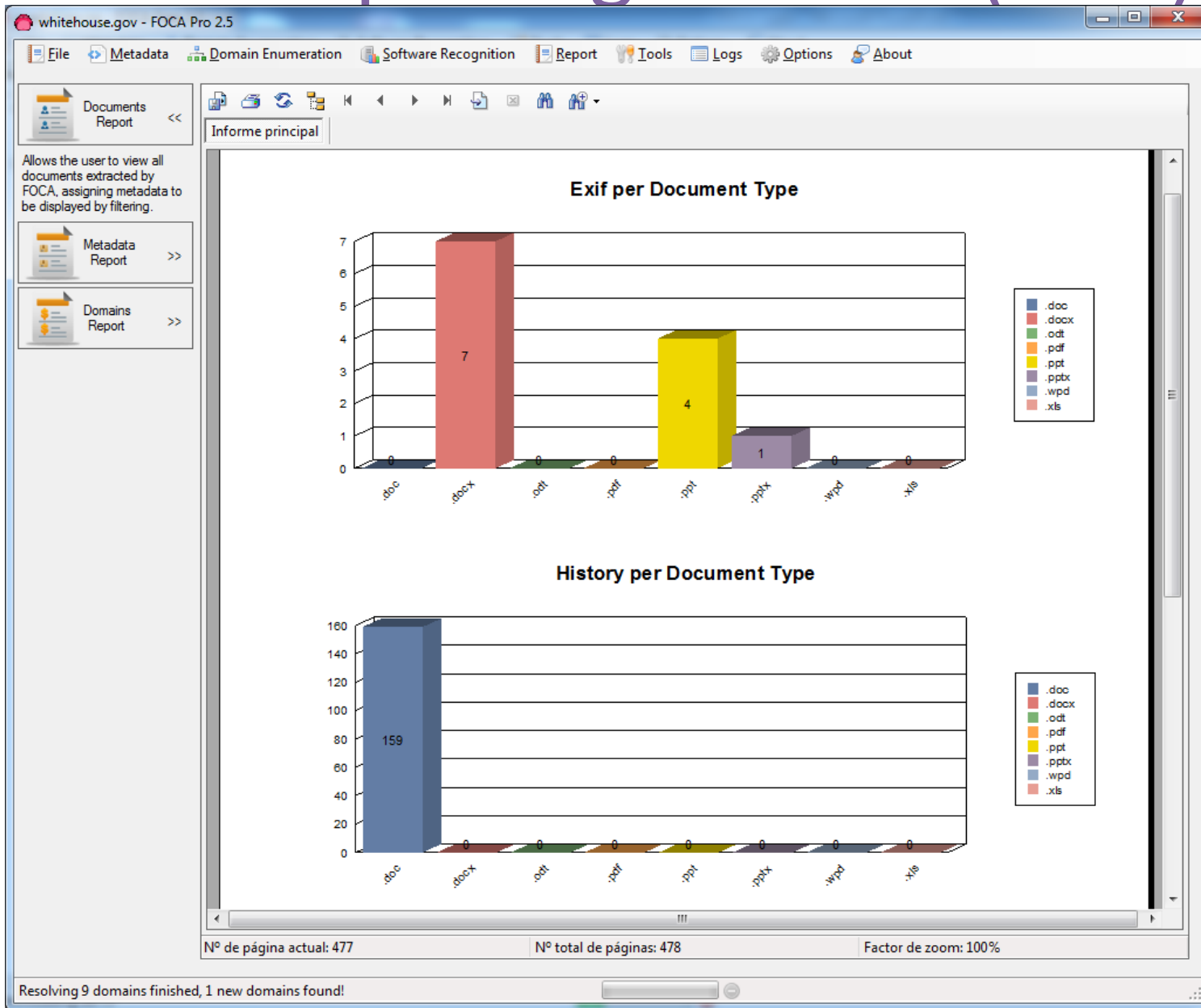
Nombre: elladodelmal.blogspot.com
Served by:
- ns3.google.com
216.239.36.10
blogspot.com
- ns4.google.com
```

# DNS Cache Snooping



- Internal Software
  - Windows Update
  - Gtalk
- Evilgrade
  - Detecting vulnerable software to Evilgrade attacks
- AV evasion
  - Detecting internal AV systems
- Malware driven by URL
  - Hacking a web site usually visited by internal users

# FOCA Reporting Module (PRO)



Demo: DNS  
Cache Snooping



# Fear The FOCA



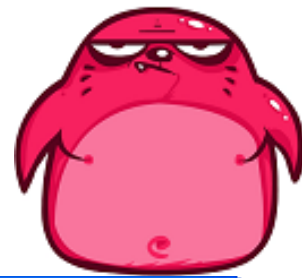


# FOCA on Linux?



# FOCA Online

<http://www.informatica64.com/FOCA>



http://www.informatica64.com/FOCA/ - Windows Internet Explorer

http://www.informatica64.com/FOCA/

Archivo Edición Ver Favoritos Herramientas Ayuda

http://www.informatica64.com/FOCA/

Informática 64  
Formación y Consultoría

## FOCA OnLine



Esta aplicación no almacena los ficheros subidos ni el contenido de los mismos.  
La única información almacenada es con fines estadísticos.

**Extensiones soportadas:** .sxw .odt .ods .odg .odp .docx .xlsx .pptx .ppsx .doc .xls .ppt .pps .pdf

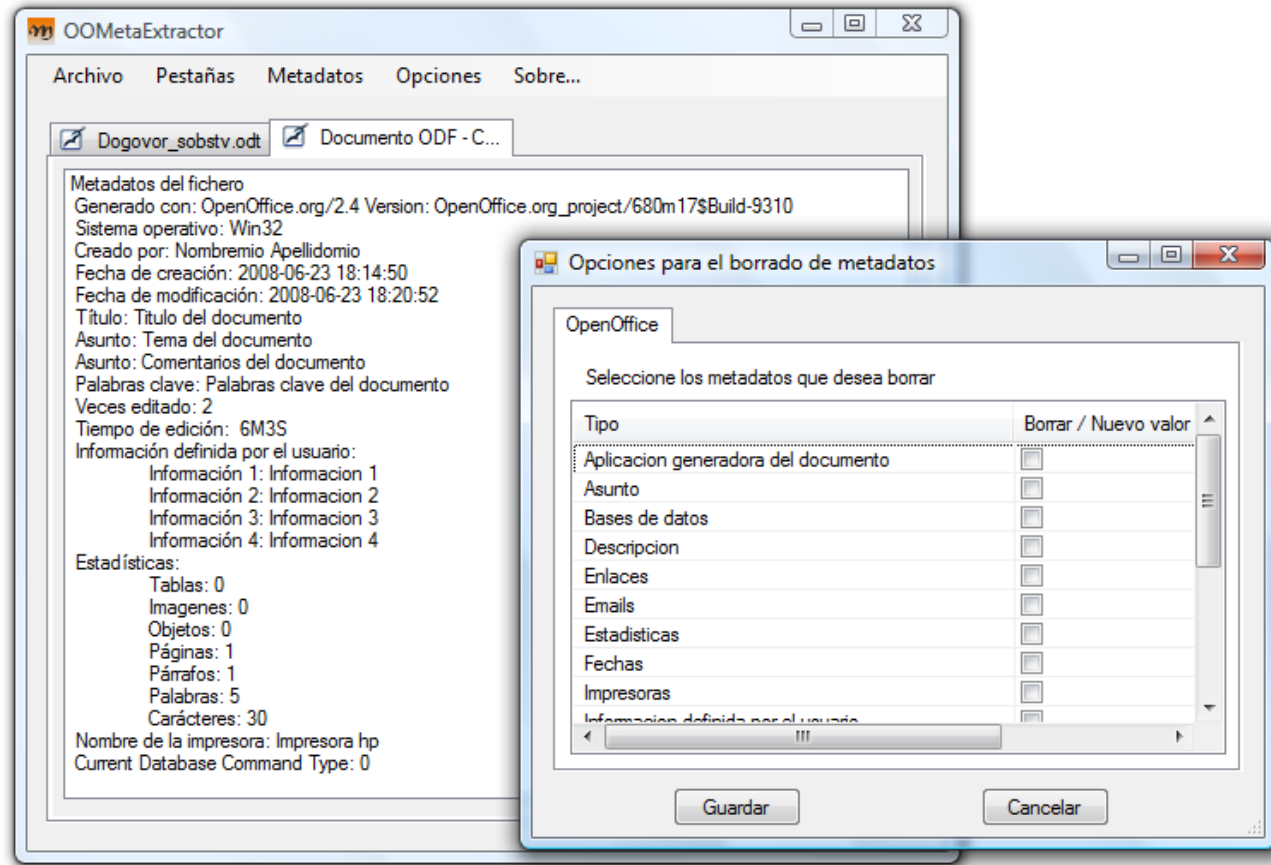
[Ver estadísticas de la foca.](#)

Internet 100%

# Cleaning documents



- OOMetaExtractor



<http://www.codeplex.org/oometaextractor>

# IIS MetaShield Protector



Internet Information Services (IIS) Manager

WIN-SDZ6SGAR65C

File View Help

Connections

- Start Page
- WIN-SDZ6SGAR65C (WIN-SDZ6SGAR65C)
- Application Pools
- Sites

### MetaShield Protector

Configuration section properties

Enable

ConnectionString

Web Sites with MetaShield Protector

Web Site	Status
Default Web Site	Started

Select files extension

- docx
- xlsx
- pptx
- ppsx
- doc
- xls
- ppt
- pps
- pdf

Log Info

Web Site: All Web Sites Date: sábado, 14 de marzo de 2009

Date	Name	Time (ms)	Size (Kb)	Web Site
15:45:14	01-03-08.doc	150	211	Default Web Site
15:42:43	vedtaegter.docx	30	17	Default Web Site
15:42:41	open.odg	320	25	Default Web Site
15:42:40	hardwood.docx	80	172	Default Web Site
15:42:38	cv.docx	2123	72	Default Web Site
15:42:37	biography.docx	2513	14	Default Web Site
15:42:38	doc.pdf	1412	532	Default Web Site
15:42:37	blair.doc	50	63	Default Web Site

Features View Content View

Configuration: 'localhost' applicationHost.config

# Get FOCA!



- FOCA Free 2.6.1
  - <http://www.informatica64.com/FOCA>
- Love FOCA and want the Pro Version?
  - Book for an online training! (28th April)
  - <http://www.informatica64.com/DownloadFOCA/Trainings.aspx>
- Have the Pro version but not the last version?
  - Help FOCA
    - Spread the word!
    - Buy a FOCA T-Shirt
    - Buy me something to drink

# Buy a FOCA T-Shirt



And be «Sexy» }:))

# Questions?



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  - <http://www.windowstecnico.com>
  - <http://www.puntocompartido.com>
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