

Informatica forense

Esempi pratici disk forensics e network forensics

Michele Ferrazzano

28/03/2011

2

Le 5 fasi

- Identificazione
- Acquisizione
- Analisi
- Valutazione
- Presentazione

Identificazione

- Rilevare cosa è effettivamente utile per l'indagine
 - Sistemi informatici
 - Sistemi di comunicazione
 - Supporti di memorizzazione esterna
 - Supporti non digitali e informazioni
 - Documenti, post-it...
 - Password, modalità di accesso a sistemi complessi...

Acquisizione

- Duplicare le informazioni in maniera fedele all'originale
 - Cloni
 - Immagini bit-a-bit
 - Immagini bit-a-bit compresse
- Obiettivi
 - Acquisire il maggior numero di dati (possibilmente tutti)
 - Rendere l'attività di acquisizione ripetibile
 - Limitare i tempi di inattività di server "importanti"

Analisi

- Mettere in evidenza i dati con contenuto informativo importante per l'indagine
 - A favore
 - A sfavore
- Documentare il processo di analisi

Valutazione

- Interpretare i dati evidenziati in fase di analisi per sostenere le proprie tesi
 - A favore
 - A sfavore

Presentazione

- Documentare
 - Cosa è stato fatto
 - Come è stato fatto
 - Cosa è emerso
 - Che significato hanno i dati emersi
- Adattare il registro all'interlocutore
 - Tecnico
 - Giurista

Analisi forense con Autopsy

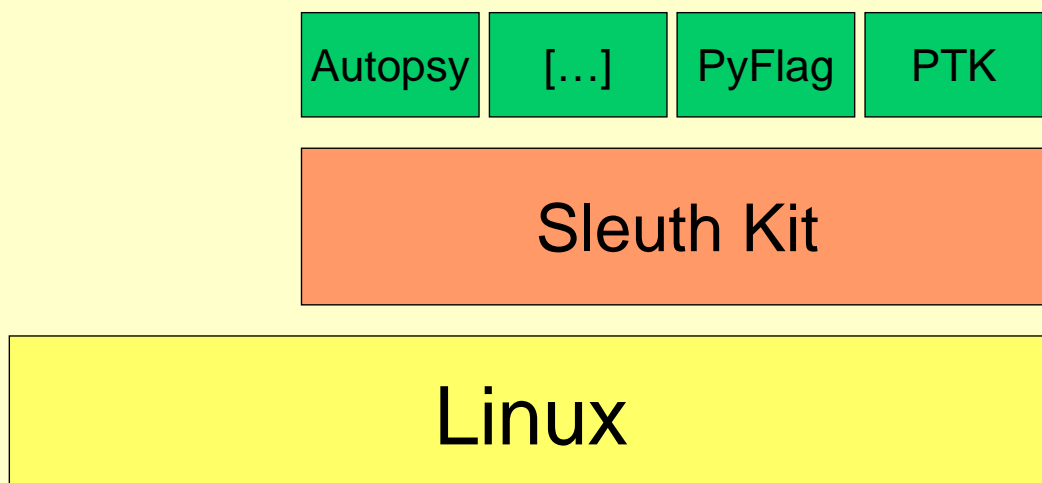


Autopsy e Sleuth Kit

- Lo **Sleuth Kit** è una collezione di programmi a linea di comando che consente di realizzare analisi forense di dischi e file system. Il tool può essere incorporato in un gran numero di sistemi per analisi forense che possono utilizzare tali comandi per accedere direttamente ai dati.
- **Autopsy Forensic Browser** è un'interfaccia grafica verso i comandi dello Sleuth Kit. Assieme consentono di condurre un'analisi forense di dischi e di file system di computer.

<http://www.sleuthkit.org>

Autopsy e Sleuth Kit (architettura)



Avvio di Autopsy

```

File Edit View Terminal Tabs Help
ubuntu@ubuntu: ~
root@ubuntu:~# autopsy
=====
Autopsy Forensic Browser
http://www.sleuthkit.org/autopsy/
ver 2.08
=====
Evidence Locker: /var/lib/autopsy
Start Time: Thu Mar 24 12:35:22 2011
Remote Host: localhost
Local Port: 9999

Open an HTML browser on the remote host and paste this URL in it:

    http://localhost:9999/autopsy

Keep this process running and use <ctrl-c> to exit

```

Avvio di Autopsy

File History Bookmarks Tools Help


http://localhost:9999/autopsy

Getting Started Latest Headlines

WARNING: Your browser currently has Java Script enabled.

You do not need Java Script to use Autopsy and it is recommended that it be turned off for security reasons.

Autopsy Forensic Browser 2.08



<http://www.sleuthkit.org/autopsy/>

OPEN CASE NEW CASE HELP

Autopsy – Creazione di un nuovo caso

History Bookmarks Tools Help

http://localhost:9999/autopsy?mod=0&view=1

Getting Started Latest Headlines

CREATE A NEW CASE

1. **Case Name:** The name of this investigation. It can contain only letters, numbers, and symbols.

2. **Description:** An optional, one line description of this case.

3. **Investigator Names:** The optional names (with no spaces) of the investigators for this case.

a.	<input type="text" value="Michele Ferrazzano"/>	b.	<input type="text"/>
c.	<input type="text"/>	d.	<input type="text"/>
e.	<input type="text"/>	f.	<input type="text"/>
g.	<input type="text"/>	h.	<input type="text"/>
i.	<input type="text"/>	j.	<input type="text"/>

Autopsy – Creazione di un nuovo caso

File Edit View History Bookmarks Tools Help

http://localhost:9999/autopsy?mod=0&view=2&case=PP_1234_2011&des

Most Visited Getting Started Latest Headlines

Creating Case: PP_1234_2011

Case directory (/var/lib/autopsy/PP_1234_2011/) created
 Configuration file (/var/lib/autopsy/PP_1234_2011/case.aut) created

We must now create a host for this case.

Autopsy – Aggiunta di un host

Case: PP_1234_2011

ADD A NEW HOST

1. **Host Name:** The name of the computer being investigated. It can contain only letters, numbers, and symbols.

2. **Description:** An optional one-line description or note about this computer.

3. **Time zone:** An optional timezone value (i.e. EST5EDT). If not given, it defaults to the local setting. A list of time zones can be found in the help files.

4. **Timeskew Adjustment:** An optional value to describe how many seconds this computer's clock was out of sync. For example, if the computer was 10 seconds fast, then enter -10 to compensate.

5. **Path of Alert Hash Database:** An optional hash database of known bad files.

6. **Path of Ignore Hash Database:** An optional hash database of known good files.

Autopsy – Aggiunta di un host

Case: PP_1234_2011

ADD A NEW HOST

1. **Host Name:** The name of the computer being investigated. It can contain only letters, numbers, and symbols.

2. **Description:** An optional one-line description or note about this computer.

3. **Time zone:** An optional timezone value (i.e. EST5EDT). If not given, it defaults to the local setting. A list of time zones can be found in the help files.

4. **Timeskew Adjustment:** An optional value to describe how many seconds this computer's clock was out of sync. For example, if the computer was 10 seconds fast, then enter -10 to compensate.

5. **Path of Alert Hash Database:** An optional hash database of known bad files.

6. **Path of Ignore Hash Database:** An optional hash database of known good files.

Autopsy – Aggiunta di un host

File Edit View History Bookmarks Tools Help

http://localhost:9999/autopsy?mod=0&view=8&case=PP_1234_2011&host=PC-01&des

Most Visited Getting Started Latest Headlines

Adding host: PC-01 to case PP_1234_2011

Host Directory (/var/lib/autopsy/PP_1234_2011/PC-01/) created

Configuration file (/var/lib/autopsy/PP_1234_2011/PC-01/host.aut) created

We must now import an image file for this host

ADD IMAGE

Autopsy – Aggiunta di un host

File Edit View History Bookmarks Tools Help

http://localhost:9999/autopsy?mod=0&view=10&case=PP_1234_2011&host=PC-01

Most Visited Getting Started Latest Headlines

Case: PP_1234_2011
Host: PC-01

No images have been added to this host yet

Select the Add Image File button below to add one

ADD IMAGE FILE **CLOSE HOST**

HELP

FILE ACTIVITY TIME LINES **IMAGE INTEGRITY** **HASH DATABASES**

VIEW NOTES **EVENT SEQUENCER**

Autopsy – Aggiunta di un'immagine

File Edit View History Bookmarks Tools Help

http://localhost:9999/autopsy?mod=0&view=13&host=PC-01&case=PP_1234_2011&inv=unknown&x=53&y=1

Most Visited Getting Started Latest Headlines

Case: PP_1234_2011
Host: PC-01

ADD A NEW IMAGE

1. Location
Enter the full path (starting with /) to the image file.
If the image is split (either raw or EnCase), then enter '*' for the extension.

2. Type
Please select if this image file is for a disk or a single partition.

Disk Partition

3. Import Method
To analyze the image file, it must be located in the evidence locker. It can be imported from its current location using a symbolic link, by copying it, or by moving it. Note that if a system failure occurs during the move, then the image could become corrupt.

Symlink Copy Move

NEXT

Autopsy – Aggiunta di un disco

File Edit View History Bookmarks Tools Help

http://localhost:9999/autopsy?mod=0&view=13&host=PC-01&case=PP_1234_2011&inv=unknown&x=53&y=1

Most Visited Getting Started Latest Headlines

Case: PP_1234_2011
Host: PC-01

ADD A NEW IMAGE

1. Location
Enter the full path (starting with /) to the image file.
If the image is split (either raw or EnCase), then enter '*' for the extension.

2. Type
Please select if this image file is for a disk or a single partition.

Disk Partition

3. Import Method
To analyze the image file, it must be located in the evidence locker. It can be imported from its current location using a symbolic link, by copying it, or by moving it. Note that if a system failure occurs during the move, then the image could become corrupt.

Symlink Copy Move

NEXT

Autopsy – Aggiunta di un disco

Image File Details

Local Name: images/sda

Data Integrity: An MD5 hash can be used to verify the integrity of the image. (With split images, this hash is for the full image file)

- Ignore** the hash value for this image.
 Calculate the hash value for this image.
 Add the following MD5 hash value for this image:

 Verify hash after importing?

File System Details

Analysis of the image file shows the following partitions:

Partition 1 (Type: NTFS (0x07))

Sector Range: 63 to 1953503999

Mount Point:

File System Type:

ADD

CANCEL

HELP

For your reference, the `mmfs` output was the following:

```
DOS Partition Table
Offset Sector: 0
Units are in 512-byte sectors
```

```
Slot Start End Length Description
00: ----- 0000000000 0000000000 0000000001 Primary Table (#0)
01: ----- 0000000001 0000000062 0000000062 Unallocated
02: 00:00 0000000063 1953503999 1953503937 NTFS (0x07)
03: ----- 1953504000 1953525167 0000021168 Unallocated
```

Autopsy – Aggiunta di un disco

Case: PP_1234_2011
Host: PC-01

ADD A NEW IMAGE

1. Location

Enter the full path (starting with /) to the image file.
If the image is split (either raw or EnCase), then enter '*' for the extension.

2. Type

Please select if this image file is for a disk or a single partition.

- Disk
 Partition

3. Import Method

To analyze the image file, it must be located in the evidence locker. It can be imported from its current location using a symbolic link, by copying it, or by moving it. Note that if a system failure occurs during the move, then the image could become corrupt.

- Symlink
 Copy
 Move

NEXT

CANCEL

HELP

Autopsy – Aggiunta di un disco

Image File Details

Local Name: images/sdg

Data Integrity: An MD5 hash can be used to verify the integrity of the image. (With split images, this hash is for the full image file)

- Ignore the hash value for this image.
 Calculate the hash value for this image.
 Add the following MD5 hash value for this image:

 Verify hash after importing?

File System Details

Analysis of the image file shows the following partitions:

Partition 1 (Type: DOS FAT16 (0x06))

Sector Range: 32 to 1966079

Mount Point: C:

File System Type: fat16

ADD

CANCEL

HELP

For your reference, the mmls output was the following:

```
DOS Partition Table
Offset Sector: 0
Units are in 512-byte sectors
```

```
Slot Start End Length Description
00: ---- 000000000 000000000 000000001 Primary Table (#0)
01: ---- 000000001 0000000031 0000000031 Unallocated
02: 00:00 000000032 0001966079 0001966048 DOS FAT16 (0x06)
```

Autopsy – Aggiunta di un disco

File Edit View History Bookmarks Tools Help

http://localhost:9999/autopsy?mod=0&view=15&img_path=%2Fdev%2Fsdg&num_img=1&sort=1&do_md5=1

Most Visited Getting Started Latest Headlines

Testing partitions

Linking image(s) into evidence locker

Image file added with ID img1

Disk image (type dos) added with ID vol1

Volume image (32 to 1966079 - fat16 - C:) added with ID vol2

OK

ADD IMAGE

Autopsy – Aggiunta di un disco

Case: PP_1234_2011
Host: PC-01

Select a volume to analyze or add a new image file.

mount	name	fs type	
<input type="radio"/>	disk	sdg-disk	raw details
<input checked="" type="radio"/>	C: /	sdg-32-1966079	fat16 details

ANALYZE ADD IMAGE FILE CLOSE HOST

HELP

FILE ACTIVITY TIME LINES IMAGE INTEGRITY HASH DATABASES

VIEW NOTES EVENT SEQUENCER

Autopsy – Timeline

Bookmarks Tools Help

http://localhost:9999/autopsy?case=PP_1234_2011&host=PC-01&inv=unknown&mod=6&view=1

ng Started Latest Headlines

CREATE DATA FILE CREATE TIMELINE VIEW TIMELINE VIEW NOTES HELP CLOSE

?

X

File Activity Timelines

Here you can create a timeline of file activity.
This process requires two steps:

1. **Create Data File** from file system data -> 2. **Create Timeline** from the data file

Use the tabs above to start.

Autopsy – Timeline

File Edit View History Bookmarks Tools Help

http://localhost:9999/autopsy?mod=6&view=1&submod=3&case=PP_1234_2011&host=PC-01&inv=unknown

Most Visited Getting Started Latest Headlines

CREATE DATA FILE CREATE TIMELINE VIEW TIMELINE VIEW NOTES HELP CLOSE

Here we will process the file system images, collect the temporal data, and save the data to a single file.

1. Select one or more of the following images to collect data from:

C:/ sdg-32-1966079 fat16

2. Select the data types to gather:

Allocated Files Unallocated Files Unallocated Meta Data Structures

3. Enter name of output file (body):
output/body

4. Generate MD5 Value?

OK

Autopsy – Timeline

File Edit View History Bookmarks Tools Help

http://localhost:9999/autopsy?mod=6&view=1&submod=3&case=PP_1234_2011&host=PC-01&inv=unknown

Most Visited Getting Started Latest Headlines

CREATE DATA FILE CREATE TIMELINE VIEW TIMELINE VIEW NOTES HELP CLOSE

Running `fls -r -m` on vol2
Running `ils -m` on vol2

Body file saved to `/var/lib/autopsy/PP_1234_2011/PC-01/output/body`

Entry added to host config file

The next step is to sort the data into a timeline.

OK

Autopsy – Timeline

File Edit View History Bookmarks Tools Help

http://localhost:9999/autopsy?body=vol3&mod=6&view=1&submod=5&host=PC-01&case=PP_1234_2011&in

Most Visited Getting Started Latest Headlines

CREATE DATA FILE CREATE TIMELINE VIEW TIMELINE VIEW NOTES HELP CLOSE

Now we will sort the data and save it to a timeline.

- Select the data input file (body):
 - body
- Enter the starting date:

None:

Specify: Mar 1 2011
- Enter the ending date:

None:

Specify: Mar 1 2011
- Enter the file name to save as:

output/timeline.txt
- Choose the output format:
 - Tabulated (normal)
 - Comma delimited with hourly summary
 - Comma delimited with daily summary
- Generate MD5 Value?

OK

Autopsy – Timeline

File Edit View History Bookmarks Tools Help

http://localhost:9999/autopsy?body=vol3&mod=6&view=1&submod=5&host=PC-01&case=PP_1234_2011&in

Most Visited Getting Started Latest Headlines

CREATE DATA FILE CREATE TIMELINE VIEW TIMELINE VIEW NOTES HELP CLOSE

Creating Timeline using all dates (Time Zone:)

Timeline saved to /var/lib/autopsy/PP_1234_2011/PC-01/output/timeline.txt

Entry added to host config file

OK

(NOTE: It is easier to view the timeline in a text editor than here)

Autopsy – Timeline

CREATE DATA FILE CREATE TIMELINE VIEW TIMELINE VIEW NOTES HELP CLOSE						
< Feb 2011 Summary Apr 2011 ->						
Mar 2011 OK						
Tue Mar 22 2011 23:52:30	394639	..c	-rwxrwxrwx	0 0	8612877	C:/12345/Ricerca/Bibliografia/Nuova cartella/4.pdf
	432301	..c	-rwxrwxrwx	0 0	8612878	C:/12345/Ricerca/Bibliografia/Nuova cartella/5.pdf
	1490663	..c	-rwxrwxrwx	0 0	8612879	C:/12345/Ricerca/Bibliografia/Nuova cartella/6.pdf
Tue Mar 22 2011 23:52:32	501951	..c	-rwxrwxrwx	0 0	8612880	C:/12345/Ricerca/Bibliografia/Nuova cartella/7.pdf
	4103042	..c	-rwxrwxrwx	0 0	8612881	C:/12345/Ricerca/Bibliografia/Nuova cartella/8.pdf
Tue Mar 22 2011 23:52:34	1343877	..c	-rwxrwxrwx	0 0	8612882	C:/12345/Ricerca/Bibliografia/Nuova cartella/9.pdf
	76579	..c	-rwxrwxrwx	0 0	8612883	C:/12345/Ricerca/Bibliografia/Nuova cartella/index.pdf
Tue Mar 22 2011 23:52:36	16384	..c	d/drwxrwxrwx	0 0	8464911	C:/12345/Ricerca/Consulente tecnico
	16384	..c	d/drwxrwxrwx	0 0	8464913	C:/12345/Ricerca/da sistemare
	341	..c	-rwxrwxrwx	0 0	8612886	C:/12345/Ricerca/Bibliografia/Nuova cartella/riferimento.txt
	75776	..c	-rwxrwxrwx	0 0	9065479	C:/12345/Ricerca/Consulente tecnico/iclc-191104.ppt
Tue Mar 22 2011 23:52:38	212988	..c	-rwxrwxrwx	0 0	9068553	C:/12345/Ricerca/da sistemare/Baker, Ervin - Analysis Computer Network.pdf
	233851	..c	-rwxrwxrwx	0 0	9068560	C:/12345/Ricerca/da sistemare/Filod - The Harms of Pornography Exposure Among Children and Young People.pdf
	377497	..c	-rwxrwxrwx	0 0	9068564	C:/12345/Ricerca/da sistemare/j.1468-2958.2009.01343.x.pdf
	414012	..c	-rwxrwxrwx	0 0	9068568	C:/12345/Ricerca/da sistemare/j.1530-9134.2010.00254.x.pdf
Tue Mar 22 2011 23:52:40	150044	..c	-rwxrwxrwx	0 0	9068572	C:/12345/Ricerca/da sistemare/j.1744-1617.2010.01323.x.pdf
	110252	..c	-rwxrwxrwx	0 0	9068576	C:/12345/Ricerca/da sistemare/j.1747-9991.2010.00292.x.pdf
	764108	..c	-rwxrwxrwx	0 0	9068584	C:/12345/Ricerca/da sistemare/Liu, Uehara, Sasaki - Development of digital forensics practice and research in Japan.pdf

Autopsy – Timeline

CREATE DATA FILE CREATE TIMELINE VIEW TIMELINE VIEW NOTES HELP CLOSE						
< Feb 2011 Summary Apr 2011 ->						
Mar 2011 OK						
Tue Mar 22 2011 23:52:30	394639	..c	-rwxrwxrwx	0 0	8612877	C:/12345/Ricerca/Bibliografia/Nuova cartella/4.pdf
	432301	..c	-rwxrwxrwx	0 0	8612878	C:/12345/Ricerca/Bibliografia/Nuova cartella/5.pdf
	1490663	..c	-rwxrwxrwx	0 0	8612879	C:/12345/Ricerca/Bibliografia/Nuova cartella/6.pdf
Tue Mar 22 2011 23:52:32	501951	..c	-rwxrwxrwx	0 0	8612880	C:/12345/Ricerca/Bibliografia/Nuova cartella/7.pdf
	4103042	..c	-rwxrwxrwx	0 0	8612881	C:/12345/Ricerca/Bibliografia/Nuova cartella/8.pdf
Tue Mar 22 2011 23:52:34	1343877	..c	-rwxrwxrwx	0 0	8612882	C:/12345/Ricerca/Bibliografia/Nuova cartella/9.pdf
	76579	..c	-rwxrwxrwx	0 0	8612883	C:/12345/Ricerca/Bibliografia/Nuova cartella/index.pdf
Tue Mar 22 2011 23:52:36	16384	..c	d/drwxrwxrwx	0 0	8464911	C:/12345/Ricerca/Consulente tecnico
	16384	..c	d/drwxrwxrwx	0 0	8464913	C:/12345/Ricerca/da sistemare
	341	..c	-rwxrwxrwx	0 0	8612886	C:/12345/Ricerca/Bibliografia/Nuova cartella/riferimento.txt
	75776	..c	-rwxrwxrwx	0 0	9065479	C:/12345/Ricerca/Consulente tecnico/iclc-191104.ppt
Tue Mar 22 2011 23:52:38	212988	..c	-rwxrwxrwx	0 0	9068553	C:/12345/Ricerca/da sistemare/Baker, Ervin - Analysis Computer Network.pdf
	233851	..c	-rwxrwxrwx	0 0	9068560	C:/12345/Ricerca/da sistemare/Filod - The Harms of Pornography Exposure Among Children and Young People.pdf
	377497	..c	-rwxrwxrwx	0 0	9068564	C:/12345/Ricerca/da sistemare/j.1468-2958.2009.01343.x.pdf
	414012	..c	-rwxrwxrwx	0 0	9068568	C:/12345/Ricerca/da sistemare/j.1530-9134.2010.00254.x.pdf
Tue Mar 22 2011 23:52:40	150044	..c	-rwxrwxrwx	0 0	9068572	C:/12345/Ricerca/da sistemare/j.1744-1617.2010.01323.x.pdf
	110252	..c	-rwxrwxrwx	0 0	9068576	C:/12345/Ricerca/da sistemare/j.1747-9991.2010.00292.x.pdf
	764108	..c	-rwxrwxrwx	0 0	9068584	C:/12345/Ricerca/da sistemare/Liu, Uehara, Sasaki - Development of digital forensics practice and research in Japan.pdf

Come interpretare questa timeline?

Autopsy – Timeline

CREATE DATA FILE CREATE TIMELINE VIEW TIMELINE VIEW NOTES HELP CLOSE

<- Feb 2011 Summary Apr 2011 ->

Mar 2011 OK

Tue Mar 22 2011 23:52:30	394639	...	-rw-rw-rw-	0 0	8612877	C:/12345/Ricerca/Bibliografia/Nuova cartella/4.pdf
	432301	...	-w-rw-rw-	0 0	8612878	C:/12345/Ricerca/Bibliografia/Nuova cartella/6.pdf
	1490663	...	-w-rw-rw-	0 0	8612879	C:/12345/Ricerca/Bibliografia/Nuova cartella/6.pdf
Tue Mar 22 2011 23:52:32	501951	...	-w-rw-rw-	0 0	8612880	C:/12345/Ricerca/Bibliografia/Nuova cartella/6.pdf
	4103042	...	-w-rw-rw-	0 0	8612881	C:/12345/Ricerca/Bibliografia/Nuova cartella/8.pdf
Tue Mar 22 2011 23:52:34	1343877	...	-w-rw-rw-	0 0	8612882	C:/12345/Ricerca/Bibliografia/Nuova cartella/9.pdf
	76579	...	-w-rw-rw-	0 0	8612883	C:/12345/Ricerca/Bibliografia/Nuova cartella/9.pdf
Tue Mar 22 2011 23:52:36	16384	...	d-rwxrwxrwx	0 0	8464911	C:/12345/Ricerca/da sistemare
	16384	...	d-rwxrwxrwx	0 0	8464913	C:/12345/Ricerca/da sistemare
	341	...	-w-rw-rw-	0 0	8612886	C:/12345/Ricerca/Bibliografia/Nuova cartella/riferimento.txt
	75776	...	-w-rw-rw-	0 0	9068543	C:/12345/Ricerca/da sistemare/Baker, E.M. - Analysis Computer Network.pdf
Tue Mar 22 2011 23:52:38	212988	...	-w-rw-rw-	0 0	9068543	C:/12345/Ricerca/da sistemare/Baker, E.M. - Analysis Computer Network.pdf
	233851	...	-w-rw-rw-	0 0	9068544	C:/12345/Ricerca/da sistemare/Elrod - The Harms of Pornography Exposure Among Children.pdf
	377497	...	-w-rw-rw-	0 0	9068544	C:/12345/Ricerca/da sistemare/Elrod - The Harms of Pornography Exposure Among Children.pdf
	414012	...	-w-rw-rw-	0 0	9068548	C:/12345/Ricerca/da sistemare/10.00254.x.pdf
Tue Mar 22 2011 23:52:40	150044	...	-w-rw-rw-	0 0	9068572	C:/12345/Ricerca/da sistemare/1744-1617/2010-01323.x.pdf
	110252	...	-w-rw-rw-	0 0	9068576	C:/12345/Ricerca/da sistemare/j.1747-9991.2010.00292.x.pdf
	764108	...	-rw-rw-rw-	0 0	9068584	C:/12345/Ricerca/da sistemare/Liu, Uehara, Sasaki - Development of digital forensics practice and research in Japan.pdf

Creazione in sequenza di file

Come interpretarlo?

Es: disco analizzato è la destinazione di copia massiva da altro disco

Autopsy – Timeline

CREATE DATA FILE CREATE TIMELINE VIEW TIMELINE VIEW NOTES HELP CLOSE

<- Feb 2011 Summary Apr 2011 ->

Mar 2011 OK

Tue Mar 22 2011 23:52:30	394639	...	-rw-rw-rw-	0 0	8612877	C:/12345/Ricerca/Bibliografia/Nuova cartella/4.pdf
	432301	...	-w-rw-rw-	0 0	8612878	C:/12345/Ricerca/Bibliografia/Nuova cartella/6.pdf
	1490663	...	-w-rw-rw-	0 0	8612879	C:/12345/Ricerca/Bibliografia/Nuova cartella/6.pdf
Tue Mar 22 2011 23:52:32	501951	...	-w-rw-rw-	0 0	8612880	C:/12345/Ricerca/Bibliografia/Nuova cartella/6.pdf
	4103042	a..	-w-rw-rw-	0 0	8612881	C:/12345/Ricerca/Bibliografia/Nuova cartella/8.pdf
Tue Mar 22 2011 23:52:34	1343877	a..	-w-rw-rw-	0 0	8612882	C:/12345/Ricerca/Bibliografia/Nuova cartella/9.pdf
	76579	a..	-w-rw-rw-	0 0	8612883	C:/12345/Ricerca/Bibliografia/Nuova cartella/9.pdf
Tue Mar 22 2011 23:52:36	16384	a..	d-rwxrwxrwx	0 0	8464911	C:/12345/Ricerca/Consulente tecnico
	16384	a..	d-rwxrwxrwx	0 0	8464913	C:/12345/Ricerca/da sistemare
	341	a..	-w-rw-rw-	0 0	8612886	C:/12345/Ricerca/Bibliografia/Nuova cartella/riferimento.txt
	75776	a..	-w-rw-rw-	0 0	9068543	C:/12345/Ricerca/da sistemare/Baker, E.M. - Analysis Computer Network.pdf
Tue Mar 22 2011 23:52:38	212988	a..	-w-rw-rw-	0 0	9068543	C:/12345/Ricerca/da sistemare/Baker, E.M. - Analysis Computer Network.pdf
	233851	a..	-w-rw-rw-	0 0	9068544	C:/12345/Ricerca/da sistemare/Elrod - The Harms of Pornography Exposure Among Children.pdf
	377497	a..	-w-rw-rw-	0 0	9068544	C:/12345/Ricerca/da sistemare/Elrod - The Harms of Pornography Exposure Among Children.pdf
	414012	a..	-w-rw-rw-	0 0	9068548	C:/12345/Ricerca/da sistemare/10.00254.x.pdf
Tue Mar 22 2011 23:52:40	150044	a..	-w-rw-rw-	0 0	9068572	C:/12345/Ricerca/da sistemare/1744-1617/2010-01323.x.pdf
	110252	a..	-w-rw-rw-	0 0	9068576	C:/12345/Ricerca/da sistemare/j.1747-9991.2010.00292.x.pdf
	764108	a..	-rw-rw-rw-	0 0	9068584	C:/12345/Ricerca/da sistemare/Liu, Uehara, Sasaki - Development of digital forensics practice and research in Japan.pdf

Accesso in sequenza di file

Come interpretarlo?

Es: disco analizzato è l'origine di copia massiva da altro disco; accesso automatico massivo da parte di un programma (antivirus ...)

Autopsy – Analisi

File Edit View History Bookmarks Tools Help

http://localhost:9999/autopsy?mod=0&view=16&case=PP_1234_2011&host=PC-01&inv=unknown

Most Visited Getting Started Latest Headlines

Case: PP_1234_2011
Host: PC-01

Select a volume to analyze or add a new image file.

CASE GALLERY HOST GALLERY HOST MANAGER

mount	name	fs type	
<input type="radio"/> disk	sdg-disk	raw	details
<input checked="" type="radio"/> C: /	sdg-32-1966079	fat16	details

ANALYZE ADD IMAGE FILE CLOSE HOST

HELP

FILE ACTIVITY TIME LINES IMAGE INTEGRITY HASH DATABASES

VIEW NOTES EVENT SEQUENCER

Autopsy – Analisi

marks Tools Help

http://localhost:9999/autopsy?mod=0&view=17&host=PC-01&case=PP_1234_2011&inv=unknown&vol=vol2&>

Latest Headlines

FILE ANALYSIS KEYWORD SEARCH FILE TYPE IMAGE DETAILS META DATA DATA UNIT HELP CLOSE

? X

To start analyzing this volume, choose an analysis mode from the tabs above.

Autopsy – Analisi

FILE ANALYSIS KEYWORD SEARCH FILE TYPE IMAGE DETAILS META DATA DATA UNIT HELP CLOSE

Directory Seek

Enter the name of a directory that you want to view.
C:/

VIEW

File Name Search

Enter a Perl regular expression for the file names you want to find.

SEARCH

ALL DELETED FILES

EXPAND DIRECTORIES

Current Directory: C:/

ADD NOTE GENERATE MDS LIST OF FILES

DEL	Type	NAME	WRITTEN	ACCESSED	CREATED	SIZE	UID	GID
✓	r / r	.._Trashes	2009.07.15 17:56:24 (UTC)	2009.07.17 00:00:00 (UTC)	2009.07.15 17:56:24 (UTC)	4096	0	0
✓	d / d	.fsevents/	2009.07.15 17:58:46 (UTC)	2009.07.15 00:00:00 (UTC)	2009.07.15 17:58:46 (UTC)	0	0	0
✓	d / d	.Spotlight-V100/	2009.07.15 17:58:46 (UTC)	2009.07.15 00:00:00 (UTC)	2009.07.15 17:58:46 (UTC)	0	0	0
	d / d	1191/	2011.03.02 20:23:14 (UTC)	2011.03.03 00:00:00 (UTC)	2011.03.02 20:23:12 (UTC)	16384	0	0
	d / d	12345/	2011.03.22 23:52:16 (UTC)	2011.03.22 00:00:00 (UTC)	2011.03.22 23:52:14 (UTC)	16384	0	0

File Browsing Mode

In this mode, you can view file and directory contents.

File contents will be shown in this window.
More file details can be found using the Metadata link at the end of the list (on the right).
You can also sort the files using the column headers

Autopsy – Analisi

FILE ANALYSIS KEYWORD SEARCH FILE TYPE IMAGE DETAILS META DATA DATA UNIT HELP CLOSE

Directory Seek

Enter the name of a directory that you want to view.
C:/

VIEW

File Name Search

Enter a Perl regular expression for the file names you want to find.

SEARCH

ALL DELETED FILES

EXPAND DIRECTORIES

Current Directory: C:/ 12345/ Ricerca/ Dottorato -
emuleforensic/ /emuleforensic 0.50a/

ADD NOTE GENERATE MDS LIST OF FILES

DEL	Type	NAME	WRITTEN	ACCESSED	CREATED	SIZE	UID	GID	META
	d / d	../	2011.03.22 23:53:08 (UTC)	2011.03.22 00:00:00 (UTC)	2011.03.22 23:53:06 (UTC)	16384	0	0	9498628
	d / d	./	2011.03.22 23:53:08 (UTC)	2011.03.22 00:00:00 (UTC)	2011.03.22 23:53:06 (UTC)	16384	0	0	9498627
	r / r	ACSearchStringsDat.c	2010.02.07 20:29:48 (UTC)	2011.03.22 00:00:00 (UTC)	2011.03.22 23:53:06 (UTC)	1558	0	0	9498631
	r / r	ACSearchStringsDat.h	2010.02.07 20:29:48 (UTC)	2011.03.22 00:00:00 (UTC)	2011.03.22 23:53:06 (UTC)	87	0	0	9498634
	r / r	ACSearchStringsDat.o	2010.10.19 14:50:50 (UTC)	2011.03.22 00:00:00 (UTC)	2011.03.22 23:53:06 (UTC)	1844	0	0	9498637
	r / r	clientsMet.c	2010.02.07 20:29:48 (UTC)	2011.03.22 00:00:00 (UTC)	2011.03.22 23:53:06 (UTC)	2710	0	0	9498639
	r / r	clientsMet.h	2010.02.07 20:29:48 (UTC)	2011.03.22 00:00:00 (UTC)	2011.03.22 23:53:06 (UTC)	78	0	0	9498641
	r / r	clientsMet.o	2010.10.19 14:50:26 (UTC)	2011.03.22 00:00:00 (UTC)	2011.03.22 23:53:06 (UTC)	4900	0	0	9498643
	r / r	connetti.xsl	2010.02.21 12:44:14 (UTC)	2011.03.22 00:00:00 (UTC)	2011.03.22 23:53:06 (UTC)	2404	0	0	9498644
	r / r	constant.h	2010.10.19 14:50:24 (UTC)	2011.03.22 00:00:00 (UTC)	2011.03.22 23:53:06 (UTC)	2579	0	0	9498645

File Browsing Mode

Autopsy – Analisi

File Edit View History Bookmarks Tools Help

http://localhost:9999/autopsy?mod=2&view=12&case=PP_1234_2011&host=PC-

Most Visited Getting Started Latest Headlines

PP_1234_2011:PC-01:vol2 http://localh...meta=9486858

MD5 Values for files in C:/12345/Ricerca/Dottorato - emuleforensic/emuleforensic 0.50a/ (sdg-32-1966079)

```

8d8a31050ec99ad9691a5f1ceae6e499 - ACSearchStringsDat.c
052509b3bb6ecc48c02d965e691faee9 - ACSearchStringsDat.h
23e2f9d91af5a5bbde8e7c2e13acf4a0 - ACSearchStringsDat.o
f715fb701ce38019c2c9205189817b64 - clientsMet.c
53df1c357e1c9d0ea81316d587e42634 - clientsMet.h
3261ebfba4735b33dab20c5a3434b361 - clientsMet.o
93ec7de95d6145fe3b9eec4b00165d58 - connetti.xsl
3de5eb8cfc3f3df73374cc10682d9ff7 - constant.h
c61a544677dbad8cc7855b8dc9b5453d - emuleforensic
37374fe977a33c881ef43ebcc1e09edd - emuleforensic.c
e262a1b6ddd9a63316803c1258cd409 - emuleforensic.o
cbf026ee4cdc9da607cb783e309fc6a2 - esempiomaster.xml
edfad7acd1f0abfc11f5f0fd19bd924b - knownMet.c
f07c31c7cbab6cbfb9eb8dc8333bf7d8 - knownMet.h
eec0f2e9e6df7a9c8bb09d49dd5f670 - knownMet.o
53e7912f26a63ec0b645180990edb836 - Makefile
115c3efc2150c4418cb521770b8aa554 - output-7.xml
d5675e12bce17c00f59aea980edfab60 - preferencesDat.c
f15abb3a0716b4c9e156cb5f069f4506 - preferencesDat.h
a8dfacca71b00f884090d2dbe5ba70d9 - preferencesDat.o
f4fd1d05d2dbb31cbc88033b93cb5eeb - report.html
2d19defb6db4cf0b228079083dcbc37b - schema.xsd
2dfc7c2445f1465b4dcf46fd5a57e4e2 - struct.h
197088e9a49ebf9a773af6f213175954 - transform.xsl
5ac3b9f7a4ef536fdff1896ef5156143 - util.c
8c7325707e4beb15f0d4e52e0518c860 - util.h
34d82ae2006564c7dbde5cd1db876b6f - util.o

```

Autopsy – Analisi

File Edit View History Bookmarks Tools Help

http://localhost:9999/autopsy?mod=1&submod=2&case=PP_1234_2011&host=PC-01&inv=unknown&vol=vol2

Most Visited Getting Started Latest Headlines

FILE ANALYSIS KEYWORD SEARCH FILE TYPE IMAGE DETAILS META DATA DATA UNIT HELP CLOSE

File Name	Size	Created	Modified	Accessed	Permissions
r/r C:/_go7.pdf	225822	2009.06.22 14:56:34 (UTC)	2009.06.23 00:00:00 (UTC)	2009.06.22 14:56:32 (UTC)	0 0 15
r/r C:/_go6.pdf	193673	2009.06.22 14:53:16 (UTC)	2009.06.23 00:00:00 (UTC)	2009.06.22 14:53:14 (UTC)	0 0 15
r/r C:/_go5.pdf	148664	2009.06.22 14:51:40 (UTC)	2009.06.23 00:00:00 (UTC)	2009.06.22 14:51:38 (UTC)	0 0 15
r/r C:/_go2.pdf	1897117	2009.06.22 14:47:12 (UTC)	2009.06.23 00:00:00 (UTC)	2009.06.22 14:47:10 (UTC)	0 0 15
r/r C:/_image.jpg	124139	2009.06.22 14:32:28 (UTC)	2009.06.23 00:00:00 (UTC)	2009.06.22 14:32:22 (UTC)	0 0 15
r/r C:/_go1.pdf	419869	2009.06.22 14:39:34 (UTC)	2009.06.23 00:00:00 (UTC)	2009.06.22 14:39:32 (UTC)	0 0 15
r/r C:/_go3.pdf	130032	2009.06.22 14:48:56 (UTC)	2009.06.23 00:00:00 (UTC)	2009.06.22 14:48:54 (UTC)	0 0 15
r/r C:/_go4.pdf	59167	2009.06.22 14:50:30 (UTC)	2009.06.23 00:00:00 (UTC)	2009.06.22 14:50:28 (UTC)	0 0 16

ASCII (display - report) * Hex (display - report) * ASCII Strings (display - report) * Export * Add Note

File Type: writable, no read permission
Deleted File Recovery Mode

Contents Of File: C:/_IVCE.tmp

Done

Autopsy – Ricerca

History Bookmarks Tools Help

http://localhost:9999/autopsy?mod=1&submod=4&case=PP_1234_2011&host=PC-01&inv=unknown&vol=vol2

Getting Started Latest Headlines

FILE ANALYSIS KEYWORD SEARCH FILE TYPE IMAGE DETAILS META DATA DATA UNIT HELP CLOSE

Keyword Search of Allocated and Unallocated Space

Enter the keyword string or expression to search for:

emule

ASCII Unicode

Case Insensitive grep Regular Expression

SEARCH

EXTRACT STRINGS EXTRACT UNALLOCATED

[Regular Expression Cheat Sheet](#)

NOTE: The keyword search runs `grep` on the image.
A list of what will and what will not be found is available [here](#).

Predefined Searches

CC Date SSN2 IP SSN1

Autopsy – Ricerca

History Bookmarks Tools Help

http://localhost:9999/autopsy?mod=1&submod=4&case=PP_1234_2011&host=PC-01&inv=unknown&vol=vol2

Getting Started Latest Headlines

01.vol2 Autopsy grep Cheat Sheet

FILE ANALYSIS KEYWORD SEARCH FILE TYPE IMAGE DETAILS META DATA DATA UNIT HELP CLOSE

Keyword Search of Allocated and Unallocated Space

Enter the keyword string or expression to search for:

[0-2]?[[:digit:]]{1,2}\.[0-2]?[[:digit:]]{1,2}

ASCII Unicode

Case Insensitive grep Regular Expression

SEARCH

EXTRACT STRINGS EXTRACT UNALLOCATED

[Regular Expression Cheat Sheet](#)

NOTE: The keyword search runs `grep` on the image.
A list of what will and what will not be found is available [here](#).

Predefined Searches

CC Date SSN2 IP SSN1

Autopsy – Ricerca

FILE ANALYSIS KEYWORD SEARCH FILE TYPE IMAGE DETAILS META DATA DATA UNIT HELP CLOSE

Searching for ASCII: Done
Saving: Done
1620 hits- [link to results](#)

Searching for Unicode: Done
Saving: Done
553 hits- [link to results](#)

[New Search](#)

1620 occurrences of **emule** were found
Search Options:
ASCII
Case Insensitive

There were more than 1000 hits.
Please revise the search to a manageable amount.

The 1620 hits can be found in: /var/lib/autopsy
/PP_1234_2011/PC-01/output/sdg-32-1966079-0.srch

553 occurrences of **emule** were found
Search Options:
Unicode
Case Insensitive

Sector 21960 ([Hex](#) - [Ascii](#))
1: 114 (ammi\eMule\Temp)

Sector 21992 ([Hex](#) - [Ascii](#))
2: 114 (ammi\eMule\Temp)

Sector 609291 ([Hex](#) - [Ascii](#))
3: 174 (ENTE EMULE: ANA)

Autopsy – Ricerca

FILE ANALYSIS KEYWORD SEARCH FILE TYPE IMAGE DETAILS META DATA DATA UNIT HELP CLOSE

Search Options:
Unicode
Case Insensitive

◀ PREVIOUS NEXT ▶

EXPORT CONTENTS ADD NOTE

ASCII ([display - report](#)) * Hex ([display - report](#)) * ASCII Strings ([display - report](#))
File Type: data

Sector: 609347
Status: Allocated
[Find Meta Data Address](#)

Hex Contents of Sector 609347 in sdg-32-1966079

0	65004d00	75006c00	65004600	6f007200	e.M.u.l.e.F.o.r.
16	65006e00	73006900	63003a00	20006100	e.n.s.i.c.k.a.
32	6e006100	6c006900	73006900	20006600	n.a.l.i.s.i.f.
48	6f007200	65006e00	73006500	20006400	o.r.e.n.s.e.d.
64	65006c00	20006600	69006c00	65002000	e.l.f.i.l.e.
80	73006800	61007200	69006e00	67002000	s.h.a.r.i.n.g.
96	63006f00	6e002000	65004d00	75006c00	c.o.n.e.M.u.l.
112	65000d00	65004d00	75006c00	65002000	e..e.M.u.l.e.
128	e8002000	75006e00	20007300	6f006600	..u.n.s.o.f.
144	74007700	61007200	65002000	6f007000	t.w.a.r.e.o.p.
160	65006e00	20007300	6f007500	72006300	e.n.s.o.u.r.c.
176	65002000	63006800	65002000	63006f00	e.c.h.e.c.o.
192	6e007300	65006e00	74006500	20006400	n.s.e.n.t.e.d.
208	69002000	72006500	61006c00	69007a00	i.r.e.a.l.i.z.
224	7a006100	72006500	20006c00	27006100	z.a.r.e.l.'a.
240	74007400	69007600	69007400	e0002000	t.t.i.v.i.t.
256	64006900	20006600	69006c00	65002000	d.i.f.i.l.e.
272	73006800	61007200	69006e00	67002000	s.h.a.r.i.n.g.
288	69006e00	20006100	6d006200	69006500	i.n.a.m.b.i.e.
304	6e007400	65002000	70006500	65007200	n.t.e.p.e.e.r.
320	2d007400	6f002d00	70006500	65007200	.t.o.p.e.e.r.
336	20006200	61007300	61007400	6f002000	.b.a.s.a.t.o.
352	73007500	69002000	70007200	6f007400	s.u.i.p.r.o.t.
368	6f006300	6f006c00	6c006900	20006500	o.c.o.l.l.i.e.
384	44006f00	6e006b00	65007900	20006f00	D.o.n.k.e.y.o.
400	20004b00	61006400	65006d00	6c006900	.K.a.d.e.m.l.i.
416	61002e00	0d004400	61006c00	20007000	a...D.a.l.p.
432	75006e00	74006f00	20006400	69002000	u.n.t.o.d.i.
448	76006900	73007400	61002000	64006500	v.i.s.t.a.d.e.
464	6c006c00	27006100	6e006100	6c006900	l.l.'a.n.a.l.i.
480	73006900	20006600	6f007200	65006e00	s.i.f.o.r.e.n.
496	73006500	2c002000	75006e00	61002000	s.e...u.n.a.

Sector 21960 ([Hex](#) - [Ascii](#))
1: 114 (ammi\eMule\Temp)

Sector 21992 ([Hex](#) - [Ascii](#))
2: 114 (ammi\eMule\Temp)

Sector 609291 ([Hex](#) - [Ascii](#))
3: 174 (ENTE EMULE: ANA)

Sector 609341 ([Hex](#) - [Ascii](#))
4: 64 (9eMuleForen)
5: 168 (con eMule)

Sector 609347 ([Hex](#) - [Ascii](#))
6: 0 (eMuleForen)
7: 104 (con eMule)
8: 116 (eMule)

Sector 609348 ([Hex](#) - [Ascii](#))
9: 92 (e di eMule)

Sector 609349 ([Hex](#) - [Ascii](#))
10: 270 (tivo eMule e al)

Sector 609351 ([Hex](#) - [Ascii](#))
11: 106 (e di eMule.)

Sector 609352 ([Hex](#) - [Ascii](#))
12: 396 (o ad eMule. Que)

Sector 609358 ([Hex](#) - [Ascii](#))
13: 2 (e di eMule all')

Analisi di una email

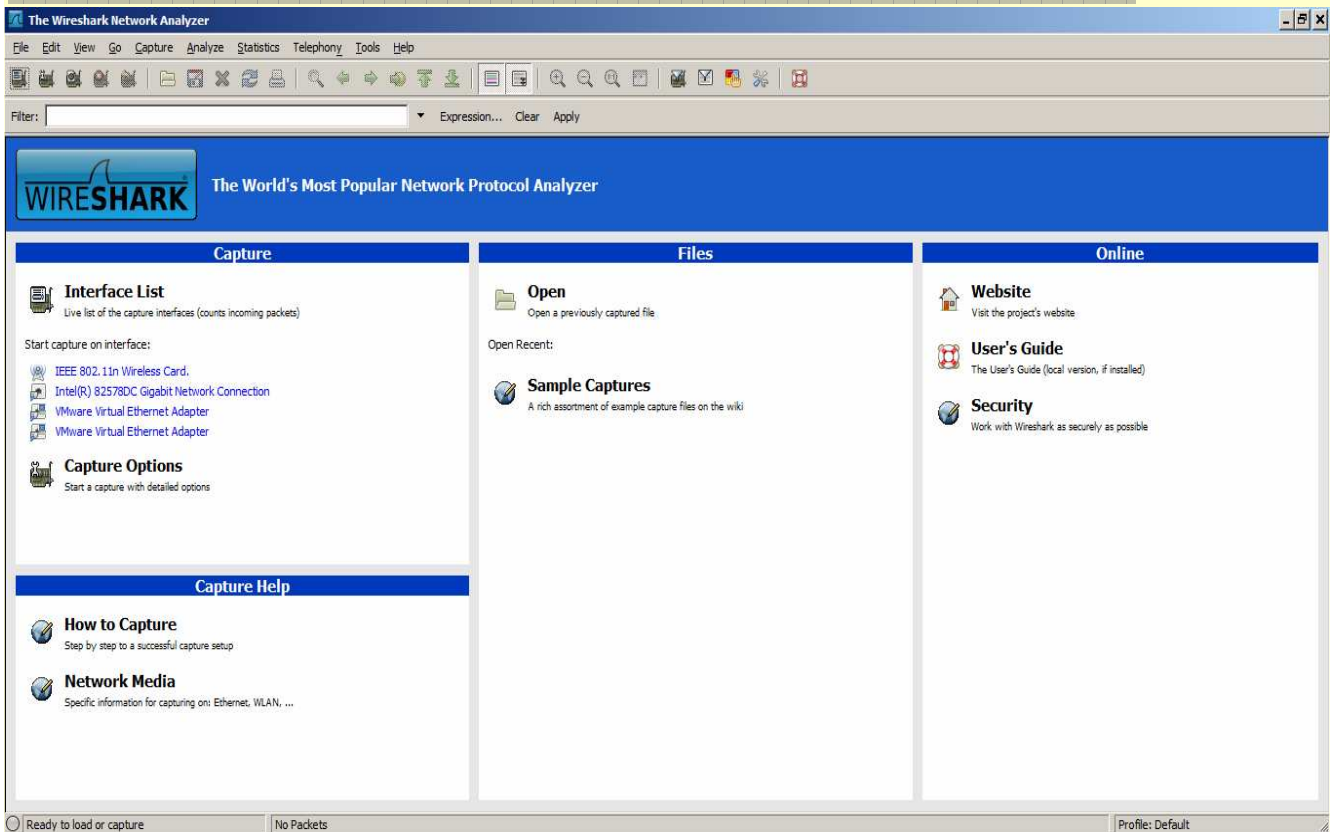
Return-Path: mittente@gmail.com
Received: from [192.168.1.83] (dynamic-adsl-84-220-169-6.clienti.tiscali.it [84.220.169.6])
by mx.google.com with ESMTPS id bs4sm597962wbb.35.2011.03.25.12.31.02
(version=SSLv3 cipher=OTHER);
Fri, 25 Mar 2011 12:31:03 -0700 (PDT)
Message-ID: 4D8CED7B.2050105@gmail.com
Date: Fri, 25 Mar 2011 20:31:07 +0100
From: Mittente Neri mittente@gmail.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; it; rv:1.9.2.15) Gecko/20110303 Lightning/1.0b2
Thunderbird/3.1.9
MIME-Version: 1.0
To: Destinatario Rossi destinatario@gmail.com
Subject: Re: Verbale ultimo
References: <4D8A677E.2060002@gmail.com> AANLkTinG17F2-8PuOfL3A_prj952-FT-
KbAceJKW8mxg@mail.gmail.com
In-Reply-To: AANLkTinG17F2-8PuOfL3A_prj952-FT-KbAceJKW8mxg@mail.gmail.com
Content-Type: multipart/alternative;
boundary="-----060500090204050700070106"
This is a multi-part message in MIME format.
-----060500090204050700070106
Content-Type: text/plain; charset=ISO-8859-1; format=flowed
Content-Transfer-Encoding: 8bit

Il 25/03/2011 19:37, Destinatario Rossi ha scritto:
> Ciao ciao ciao.
> > Ciao2 ciao2 ciao2

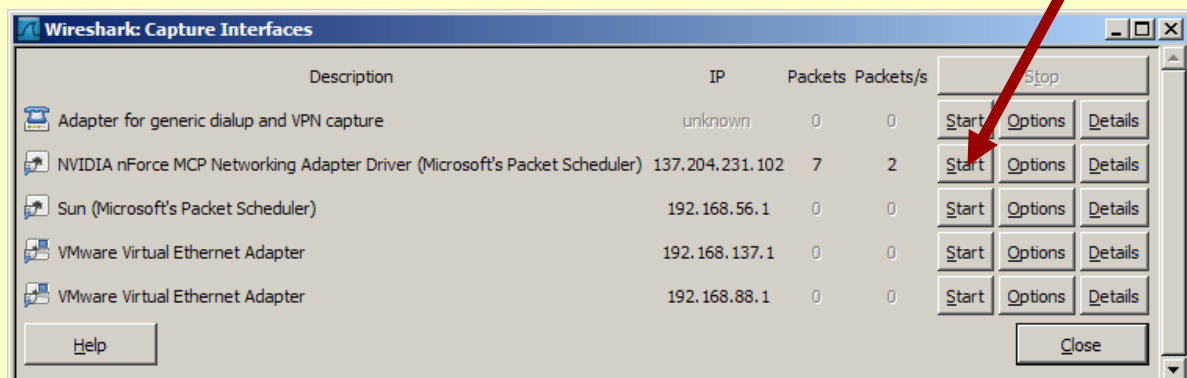
Analisi forense con Wireshark



Wireshark



Avvio dell'intercettazione del traffico



Wireshark interface showing traffic capture. Filter: Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Info
3	1.868890	MS-NLB-Physserver-01	Broadcast	MS NLB	MS NLB heartbeat
4	2.025436	3comeuro.0f7b:fa	Spanning-tree-(for-br	STP	Conf. Root = 32768/0/00:1e:c1:0f:7b:c9 Cost = 0 Port = 0x8031
5	2.721604	137.204.231.102	137.204.25.77	DNS	Standard query A www.repubblica.it
6	2.723026	137.204.25.77	137.204.231.102	DNS	Standard query response A 213.92.16.171 A 213.92.16.191
7	2.731229	137.204.231.102	213.92.16.171	TCP	prn-nm-np > http [SYN] Seq=0 win=64512 Len=0 MSS=1460
8	2.735491	213.92.16.171	137.204.231.102	TCP	http > prn-nm-np [SYN, ACK] Seq=0 Ack=1 win=5840 Len=0 MSS=1460
9	2.735506	137.204.231.102	213.92.16.171	TCP	prn-nm-np > http [ACK] Seq=1 Ack=1 win=64512 Len=0
10	2.735558	137.204.231.102	213.92.16.171	HTTP	GET / HTTP/1.1
11	2.738939	213.92.16.171	137.204.231.102	TCP	http > prn-nm-np [ACK] Seq=1 Ack=336 win=6432 Len=0
12	2.836567	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
13	2.837434	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
14	2.837477	137.204.231.102	213.92.16.171	TCP	prn-nm-np > http [ACK] Seq=336 Ack=2921 win=64512 Len=0

Frame 10 (389 bytes on wire, 389 bytes captured)
 Arrival Time: Mar 25, 2011 17:13:01.079477000
 [Time delta from previous captured frame: 0.000052000 seconds]
 [Time delta from previous displayed frame: 0.000052000 seconds]
 [Time since reference or first frame: 2.735558000 seconds]
 Frame Number: 10
 Frame Length: 389 bytes
 Capture Length: 389 bytes
 [Frame is marked: False]
 [Protocols in frame: eth:ip:tcp:http]
 [Coloring rule Name: HTTP]
 [Coloring rule String: http || tcp.port == 80]

Ethernet II, Src: AsustekC_74:a0:cc (00:23:54:74:a0:cc), Dst: All-HSRP-routers_c8 (00:00:0c:07:ac:c8)
 Internet Protocol, Src: 137.204.231.102 (137.204.231.102), Dst: 213.92.16.171 (213.92.16.171)
 Transmission Control Protocol, Src Port: prn-nm-np (1403), Dst Port: http (80), Seq: 1, Ack: 1, Len: 335
 Hypertext Transfer Protocol
 GET / HTTP/1.1\r\n
 [Expert Info (Chat/Sequence): GET / HTTP/1.1\r\n
 Request Method: GET

```

0000 00 00 0c 07 ac c8 00 23 54 74 a0 cc 08 00 45 00 .....#Tt...E.
0010 01 77 1d e7 40 00 80 06 84 5f 89 cc e7 66 d5 5c ..w.@... ..f.\
0020 10 ab 05 7b 00 50 0b 84 d4 ba 75 19 d4 00 50 18 ...{.P... ..u...P.
0030 fc 00 43 2b 00 00 47 45 54 20 2f 20 48 54 54 50 ...C+.GE T / HTTP
0040 2f 31 2e 31 0d 0a 48 6f 73 74 3a 20 77 77 77 2e /1.1..Ho st: ww.
0050 72 65 70 75 62 62 6c 69 63 61 2e 69 74 0d 0a 55 republi ca.it..U
0060 73 65 72 2d 41 67 65 6e 74 3a 20 4d 6f 7a 69 6c ser-Agen t: Mozil
0070 6c 61 2f 35 2e 30 20 28 57 69 6e 64 6f 77 73 20 la/5.0 (windo
0080 4e 54 20 35 2e 31 3b 20 72 76 3a 32 2e 30 29 20 NT 5.1; rv:2.0)
0090 47 65 63 6b 6f 2f 32 30 31 30 30 31 30 31 20 46 Gecko/20 100101 F
00a0 69 72 65 66 6f 78 2f 34 2e 30 0d 0a 41 63 63 65 Firefox/4.0..Acce
00b0 70 74 3a 20 74 65 78 74 2f 68 74 6d 6c 2c 61 70 pt: text/html,ap
00c0 70 6c 69 63 61 74 69 6f 6e 2f 78 68 74 6d 6c 2b plicatio n/xhtml+
00d0 78 6d 6c 2c 61 70 70 6c 69 63 61 74 69 6f 6e 2f xml,appl ication/
00e0 78 6d 6c 3b 71 3d 30 2e 39 2c 2a 2f 2a 3b 71 3d xml;q=0.9,*/*;q=
00f0 30 2e 38 0d 0a 41 63 63 65 70 74 2d 4c 61 6e 67 0.8..Acc ept-Lang
0100 75 61 67 65 3a 20 69 74 0d 0a 41 63 63 65 70 74 uage: it ..Accept
0110 2d 45 6e 63 6f 64 69 6e 67 3a 20 67 7a 69 70 2c -Encodin g: gzip,
0120 20 64 65 66 6c 61 74 65 0d 0a 41 63 63 65 70 74 deflate ..Accept
0130 2d 43 68 61 72 73 65 74 3a 20 49 53 4f 2d 38 38 -charset : ISO-88
0140 35 39 2d 31 2c 75 74 66 2d 38 3b 71 3d 30 2e 37 59-1,utf -8;q=0.7
0150 2c 2a 3b 71 3d 30 2e 37 0d 0a 4b 65 65 70 2d 41 *;q=0.7 ..Keep-A
0160 6c 69 76 65 3a 20 31 31 35 0d 0a 43 6f 6e 6e 65 live: 11 5..Conne
0170 63 74 69 6f 6e 3a 20 6b 65 65 70 2d 61 6c 69 76 ction: k eep-ali
0180 65 0d 0a 0d 0a .....
  
```

Absolute time when this frame was captured (frames): Packets: 3688 Displayed: 3688 Marked: 0 Profile: Default

Wireshark interface showing traffic capture. Filter: Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Info
5	2.721604	137.204.231.102	137.204.25.77	DNS	Standard query A www.repubblica.it
6	2.723026	137.204.25.77	137.204.231.102	DNS	Standard query response A 213.92.16.171 A 213.92.16.191
7	2.731229	137.204.231.102	213.92.16.171	TCP	prn-nm-np > http [SYN] Seq=0 win=64512 Len=0 MSS=1460
8	2.735491	213.92.16.171	137.204.231.102	TCP	http > prn-nm-np [SYN, ACK] Seq=0 Ack=1 win=5840 Len=0 MSS=1460
9	2.735506	137.204.231.102	213.92.16.171	TCP	prn-nm-np > http [ACK] Seq=1 Ack=1 win=64512 Len=0
10	2.735558	137.204.231.102	213.92.16.171	HTTP	GET / HTTP/1.1
11	2.738939	213.92.16.171	137.204.231.102	TCP	http > prn-nm-np [ACK] Seq=1 Ack=336 win=6432 Len=0
12	2.836567	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
13	2.837434	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
14	2.837477	137.204.231.102	213.92.16.171	TCP	prn-nm-np > http [ACK] Seq=336 Ack=2921 win=64512 Len=0
15	2.838281	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
16	2.839144	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]

Frame 10 (389 bytes on wire, 389 bytes captured)
 Ethernet II, Src: AsustekC_74:a0:cc (00:23:54:74:a0:cc), Dst: All-HSRP-routers_c8 (00:00:0c:07:ac:c8)
 Internet Protocol, Src: 137.204.231.102 (137.204.231.102), Dst: 213.92.16.171 (213.92.16.171)
 Transmission Control Protocol, Src Port: prn-nm-np (1403), Dst Port: http (80), Seq: 1, Ack: 1, Len: 335
 Hypertext Transfer Protocol
 GET / HTTP/1.1\r\n
 [Expert Info (Chat/Sequence): GET / HTTP/1.1\r\n
 Request Method: GET
 Request URI: /
 Request Version: HTTP/1.1
 Host: www.repubblica.it\r\n
 User-Agent: Mozilla/5.0 (windows NT 5.1; rv:2.0) Gecko/20100101 Firefox/4.0\r\n
 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8\r\n
 Accept-Language: it\r\n
 Accept-Encoding: gzip, deflate\r\n
 Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7\r\n
 Keep-Alive: 115\r\n
 Connection: keep-alive\r\n
 \r\n

```

0010 01 77 1d e7 40 00 80 06 84 5f 89 cc e7 66 d5 5c ..w.@... ..f.\
0020 10 ab 05 7b 00 50 0b 84 d4 ba 75 19 d4 00 50 18 ...{.P... ..u...P.
0030 fc 00 43 2b 00 00 47 45 54 20 2f 20 48 54 54 50 ...C+.GE T / HTTP
0040 2f 31 2e 31 0d 0a 48 6f 73 74 3a 20 77 77 77 2e /1.1..Ho st: ww.
0050 72 65 70 75 62 62 6c 69 63 61 2e 69 74 0d 0a 55 republi ca.it..U
0060 73 65 72 2d 41 67 65 6e 74 3a 20 4d 6f 7a 69 6c ser-Agen t: Mozil
0070 6c 61 2f 35 2e 30 20 28 57 69 6e 64 6f 77 73 20 la/5.0 (windo
0080 4e 54 20 35 2e 31 3b 20 72 76 3a 32 2e 30 29 20 NT 5.1; rv:2.0)
0090 47 65 63 6b 6f 2f 32 30 31 30 30 31 30 31 20 46 Gecko/20 100101 F
00a0 69 72 65 66 6f 78 2f 34 2e 30 0d 0a 41 63 63 65 Firefox/4.0..Acce
00b0 70 74 3a 20 74 65 78 74 2f 68 74 6d 6c 2c 61 70 pt: text/html,ap
00c0 70 6c 69 63 61 74 69 6f 6e 2f 78 68 74 6d 6c 2b plicatio n/xhtml+
00d0 78 6d 6c 2c 61 70 70 6c 69 63 61 74 69 6f 6e 2f xml,appl ication/
00e0 78 6d 6c 3b 71 3d 30 2e 39 2c 2a 2f 2a 3b 71 3d xml;q=0.9,*/*;q=
00f0 30 2e 38 0d 0a 41 63 63 65 70 74 2d 4c 61 6e 67 0.8..Acc ept-Lang
0100 75 61 67 65 3a 20 69 74 0d 0a 41 63 63 65 70 74 uage: it ..Accept
0110 2d 45 6e 63 6f 64 69 6e 67 3a 20 67 7a 69 70 2c -Encodin g: gzip,
0120 20 64 65 66 6c 61 74 65 0d 0a 41 63 63 65 70 74 deflate ..Accept
0130 2d 43 68 61 72 73 65 74 3a 20 49 53 4f 2d 38 38 -charset : ISO-88
0140 35 39 2d 31 2c 75 74 66 2d 38 3b 71 3d 30 2e 37 59-1,utf -8;q=0.7
0150 2c 2a 3b 71 3d 30 2e 37 0d 0a 4b 65 65 70 2d 41 *;q=0.7 ..Keep-A
0160 6c 69 76 65 3a 20 31 31 35 0d 0a 43 6f 6e 6e 65 live: 11 5..Conne
0170 63 74 69 6f 6e 3a 20 6b 65 65 70 2d 61 6c 69 76 ction: k eep-ali
0180 65 0d 0a 0d 0a .....
  
```

HTTP Host (http.host), 25 bytes Packets: 3688 Displayed: 3688 Marked: 0 Profile: Default

Wireshark interface showing traffic capture details. The packet list pane shows a GET request from 137.204.231.102 to 213.92.16.171. The packet bytes pane shows the raw data of the request, including headers like Host: www.repubblica.it and Accept: text/html, application/xml;q=0.9, */*;q=0.8.

Follow TCP Stream window showing the reconstructed HTTP conversation. It displays the request and response between the client and the server, including headers and body content. The status bar indicates the entire conversation is 49185 bytes.

Wireshark interface showing a packet capture of a web page. The packet list pane shows a sequence of TCP segments and an HTTP 200 OK response. The packet details pane for the selected HTTP packet shows the request and response headers, including 'Server: Apache' and 'X-MyHostname: 25, 186'.

No.	Time	Source	Destination	Protocol	Info
55	2.856346	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
56	2.856380	137.204.231.102	213.92.16.171	TCP	prm-nm-np > http [ACK] Seq=336 Ack=43801 Win=64512 Len=0
57	2.856777	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
58	2.857208	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
59	2.857234	137.204.231.102	213.92.16.171	TCP	prm-nm-np > http [ACK] Seq=336 Ack=46721 Win=64512 Len=0
60	2.857639	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
61	2.858066	213.92.16.171	137.204.231.102	HTTP	HTTP/1.1 200 OK (text/html)
62	2.858088	137.204.231.102	213.92.16.171	TCP	prm-nm-np > http [ACK] Seq=336 Ack=48535 Win=64512 Len=0
63	3.002422	137.204.231.102	213.92.16.171	HTTP	GET /favicon.ico HTTP/1.1
64	3.005601	137.92.16.171	137.204.231.102	TCP	http > prm-nm-np [ACK] Seq=48535 Ack=652 Win=7504 Len=0
65	3.016734	137.204.231.102	213.92.16.171	TCP	prm-nm-np > http [FIN, ACK] Seq=652 Ack=48535 Win=64512 Len=0
66	3.017201	213.92.16.171	137.204.231.102	TCP	http > prm-nm-np [ACK] Seq=48535 Ack=653 Win=7504 Len=0

Frame 61 (408 bytes on wire, 408 bytes captured)
Arrival Time: Mar 25, 2011 17:13:01.201985000
[Time delta from previous captured frame: 0.000427000 seconds]
[Time delta from previous displayed frame: 0.000427000 seconds]
[Time since reference or first frame: 2.858066000 seconds]
Frame Number: 61
Frame Length: 408 bytes
Capture Length: 408 bytes
[Frame is marked: False]
[Protocols in frame: eth:ip:tcp:http:data-text-lines]
[Coloring Rule Name: HTTP]
[Coloring Rule String: http || tcp.port == 80]
Ethernet II, Src: All-HSRP-routers_c8 (00:00:0c:07:ac:c8), Dst: AsustekC_74:a0:cc (00:23:54:74:a0:cc)
Internet Protocol, Src: 213.92.16.171 (213.92.16.171), Dst: 137.204.231.102 (137.204.231.102)
Transmission Control Protocol, Src Port: http (80), Dst Port: prm-nm-np (1403), Seq: 48181, Ack: 336, Len: 354
[Reassembled TCP segments (48534 bytes): #12(1460), #13(1460), #15(1460), #16(1460), #18(1460), #19(1460), #21(1460), #22(1460), #24(1460), #25(1460), #27(1460)]
Hypertext Transfer Protocol
[Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
Request Version: HTTP/1.1
Response Code: 200
Server: Apache\r\nCache-Control: max-age=61\r\nExpires: Fri, 25 Mar 2011 16:13:42 GMT\r\nX-MyHostname: 25, 186\r\n

Offset	Hex	ASCII
0000	00 23 54 74 a0 cc 00 00 0c 07 ac c8 08 00 45 00	.#TE.....E.
0010	01 8a 33 8b 40 00 00 06 ae a8 05 5c 10 ab 89 cc	.3.@.
0020	e7 66 00 50 05 7b 75 1a 90 34 0b 84 d6 09 50 18	.f.p.{u..4...P.
0030	19 20 f7 55 00 00 5d 1e 3d 2e 81 dd 08 f4 cf 73	. .u.]. =.....S
0040	02 7a 1e 44 a0 ce 6a 3d 34 df 18 2f 62 1f 2f 81	.z.F@.4..b./
0050	2f b8 cb 5a 84 bb dd 16 68 8a 32 a9 75 f6 8d 55	/.z....h.2.u.u.
0060	10 2f 07 3c a5 ae da 46 66 13 14 49 41 69 19 92	/.<.F.F.IA!..
0070	24 2d 29 e3 46 05 d0 fc 1a fe 93 d6 97 7d c9 98	S-).F.....}
0080	b2 55 05 c5 0a 52 da cd fe 32 22 97 5f e4 84 8f	.u..R..2.....
0090	27 bf 41 5c 73 e6 c7 2c 213.92.16.171 32 78	. .s. .h..Y2.X
00a0	72 14 93 31 a8 b9 7d bc ba 18 93 af 3f 1c bd 93	r..l. .s.2..X
00b0	94 20 7f d2 bf b9 fd 73 74 79 f1 65 42 4e 3a 9ds ty.eBN!.
00c0	f7 95 bf 95 65 77 58 0d 6b 1a 91 bb 28 ee 5f 76	. . .ewX. k..(.v
00d0	5b 5a ed 76 78 d2 3a b5 f2 2e ba ad 8e 9d 74 7e	[.z.vx.:t-
00e0	74 2e 0e 7e 3a 17 6a 6a 6a 6a 6a 6a 6a 6a 6a

Frame (408 bytes) Reassembled TCP (48534 bytes) Uncompressed entity body (223316 bytes)
File: F:\12345\Didattica\2011 - UniCT - IF\traff... Packets: 3688 Displayed: 62 Marked: 0

Wireshark interface showing the same packet capture but with the content of the HTTP response body displayed. The packet details pane shows the 'Content-encoded entity body (gzip): 48193 bytes -> 223316 bytes' and the 'Line-based text data: text/html' pane shows the raw HTML source code.

Offset	Hex	ASCII
00000	0a 0a 0a 0a 0a 3c 21 44 4f 43 54 59 50 45 20 68<!DOCTYPE h
00010	74 6d 6c 20 50 55 42 4c 49 43 20 22 2d 2f 2f 57	tml PUBL IC "ww
00020	33 43 2f 2f 44 54 44 20 58 48 54 4d 4c 20 31 2e	3C//DTD XHTML 1.
00030	30 20 54 72 61 6e 73 69 74 69 9f 6e 61 6c 2f 2f	0 Transitional//
00040	45 4e 22 20 22 68 74 74 70 3a 2f 9f 6f 77 77 2e	EN" http://www.
00050	77 33 2e 6f 72 67 2f 54 52 2f 78 68 74 6d 6c 31	w3.org/TR/xhtml1
00060	2f 44 54 44 2f 78 68 74 6d 6c 31 2d 74 72 61 6e	/DTD/xhtml1-tran
00070	73 69 74 69 6f 6e 61 6c 2e 64 74 64 22 3e 0a 3c	sitional.dtd"><
00080	68 74 6d 6c 20 78 6d 6c 6e 73 3d 22 68 74 74 70	html xml ns="http
00090	3a 2f 6f 77 77 2e 77 33 2e 6f 72 67 2f 31 39	//www.w3.org/19
000a0	39 39 2f 78 68 74 6d 6c 22 3e 0a 3c 68 65 61 64	99/xhtml1"><head
000b0	3e 0a 20 20 20 3c 6d 65 74 61 20 68 74 74 70	>. <meta http
000c0	2d 65 71 75 69 76 3d 22 58 2d 55 41 2d 43 6f 6d	=equiv=" X-UA-com
000d0	70 61 74 69 62 6c 65 22 20 63 6f 6e 74 63 6e 74	patible" content

Frame (408 bytes) Reassembled TCP (48534 bytes) Uncompressed entity body (223316 bytes)
Line-based text data (data-text-lines), 223316 b... Packets: 3688 Displayed: 62 Marked: 0

traffico.pcap - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: tcp.stream eq 1

No.	Time	Source	Destination	Protocol	Info
55	2.856346	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
56	2.856380	137.204.231.102	213.92.16.171	TCP	prm-nm-np > http [ACK] Seq=336 Ack=43801 win=64512 Len=0
57	2.856777	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
58	2.857208	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
59	2.857234	137.204.231.102	213.92.16.171	TCP	prm-nm-np > http [ACK] Seq=336 Ack=46721 win=64512 Len=0
60	2.857639	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
61	2.858066	213.92.16.171	137.204.231.102	HTTP	HTTP/1.1 200 OK (text/html)
62	2.858088	137.204.231.102	213.92.16.171	TCP	prm-nm-np > http [ACK] Seq=336 Ack=48535 win=64512 Len=0
63	3.002422	137.204.231.102	213.92.16.171	HTTP	GET /favicon.ico HTTP/1.1
64	3.005601	213.92.16.171	137.204.231.102	TCP	http > prm-nm-np [ACK] Seq=48535 Ack=652 win=7504 Len=0
65	3.016734	137.204.231.102	213.92.16.171	TCP	prm-nm-np > http [FIN, ACK] Seq=652 Ack=48535 Win=64512 Len=0
66	3.017741	213.92.16.171	137.204.231.102	TCP	http > prm-nm-np [ACK] Seq=48535 Ack=653 Win=7504 Len=0

Date: Fri, 25 Mar 2011 16:13:04 GMT\r\n
Age: 23\r\n
Connection: keep-alive\r\n
X-cache: HIT\r\n
X-cache-hits: 177\r\n
\r\n
Content-encoded entity body (gzip): 48193 bytes -> 223316 bytes

Line-based text data: text/html

```

\r\n
\r\n
\r\n
\r\n
\r\n
\r\n
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD
<html xmlns="http://www.w3.org/1999/xhtml">\r\n
<head>\r\n
<meta http-equiv="X-UA-Compatible" content="IE=EmulateIE7; IE=EmulateIE9" />\r\n
\r\n
<title>La Repubblica.it - Homepage</title>\r\n
\r\n
[truncated] <meta name="keywords" content="La Repubblica, notizie internazionale, giornaliero,
[truncated] <meta name="description" content="Repubblica.it: il quotidiano online con tutte le
<link rel="alternate" type="application/rss+xml" title="Homepage - La Repubblica.it" href="http
[truncated] <meta name="msapplication-task" content="name=Economia;action-uri=http://www.repubb
<meta property="fb:admins" content="100000390369341" />\r\n

```

Frame (408 bytes) Reassembled TCP (48534 bytes) Uncompressed entity body (223316 bytes)

Line-based text data (data-text-lines), 223316 b... Packets: 3688 Displayed: 62 Marked: 0 Profile: Default

Wireshark: Export Raw Data

Salva in: Nuova cartella

- la-repubblica-logo-home-payoff.png
- traffico.jpg

Nome file: index.html

Salva come: All Files (*.*)

223316 bytes of raw binary data will be written

```
F:\Nuova cartella\index.html - Notepad++
File Modifica Cerca Visualizza Formato Linguaggio Configurazione Macro Esegui TextFX Plugins Finestra 2
index.html
1
2
3
4
5
6 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
7 <html xmlns="http://www.w3.org/1999/xhtml">
8 <head>
9 <meta http-equiv="X-UA-Compatible" content="IE=EmulateIE7; IE=EmulateIE9" />
10
11 <title>La Repubblica.it - Homepage</title>
12
13 <meta name="keywords" content="La Repubblica, notizie internazionale, giornalieri, nazionale, politics, scienze, business, affari, finanza, sport, c
14 <meta name="description" content="Repubblica.it: il quotidiano online con tutte le notizie in tempo reale. News e ultime notizie. Tutti i settori: p
15 <link rel="alternate" type="application/rss+xml" title="Homepage - La Repubblica.it" href="http://www.repubblica.it/rss/homepage/rss2.0.xml" />
16 <meta name="msapplication-task" content="name=Economia;action-uri=http://www.repubblica.it/economia/icon-uri=http://www.repubblica.it/static/images,
17 <meta property="fb:admins" content="100000390369341"/>
18 <meta name="msapplication-starturl" content="http://www.repubblica.it/" />
19 <meta name="msapplication-tooltip" content="Naviga sul sito de La Repubblica.it" />
20 <meta name="msapplication-window" content="width=1024;height=768" />
21 <link rel="image_src" href="http://www.repubblica.it/images/homepage/la_repubblica_logo.gif" />
22 <link rel="canonical" href="http://www.repubblica.it/" />
23 <link rel="apple-touch-icon" href="http://www.repubblica.it/images/homepage/apple-touch-icon.png" />
24 <meta property="fb:app_id" content="124998494210426"/>
25 <link rel="search" type="application/opensearchdescription+xml" href="http://www.repubblica.it/static/pms3/common/xml/opensearch_desc.xml" title="Cerc
26 <meta name="verify-v1" content="eyc9DUeswG1mkZxy+Fza8G3Pn8F/n/2vZfVwdJKxU=" />
27 <meta name="application-name" content="Repubblica.it" />
28 <link rel="alternate" media="handheld" href="http://m.repubblica.it/" />
29
30 <meta http-equiv="Refresh" content="300;URL=index.html?refresh_ce" />
31
32
33
34 <meta http-equiv="Content-Type" content="text/html; charset=utf-8"/>
35
36
37 <link rel="shortcut icon" type="image/x-icon" href="http://www.repubblica.it/static/images/homepage/2010/favicon.ico">
38 <link rel="stylesheet" href="http://www.repubblica.it/static/css/homepage/2010/homepage.css" type="text/css" media="all" />
39
40
41 <script type="text/javascript" src="http://www.repubblica.it/static/js/common/jquery.min.js"></script>
42 <script type="text/javascript" src="http://www.repubblica.it/static/js/homepage/2010/homepage.js"></script>
43 <!-- Da scommentare per treno dei commenti
44 <script type="text/javascript" src="//javascript/swfobject.js"></script>
45 <script type="text/javascript" src="http://adagiojs.repubblica.it/uploads/js/repubblicaad.js"></script>
46
47 <script type="text/javascript" src="http://oasjs.kataweb.it/adsetup.js?hprep"></script>
48 <script type="text/javascript">
```

La Repubblica.it - Homepage

file:///F:/Nuova%20cartella/index.html

- [Quotidiano digitale](#)
- [Mobile](#)
- [Facebook](#)
- Venerdì 25 marzo 2011 – Aggiornato alle 17.11
- [l'Espresso](#)
- [Network](#)

▪ **Quotidiani locali**

- [Alto Adige](#)
- [Corriere delle Alpi](#)
- [Gazzetta di Mantova](#)
- [Gazzetta di Modena](#)
- [Gazzetta di Reggio](#)
- [Il Centro](#)
- [Il mattino di Padova](#)
- [Il Piccolo](#)
- [Il Tirreno](#)
- [Il Fò](#)
- [Il Trentino](#)
- [La Città di Salerno](#)
- [La Nuova Ferrara](#)
- [La Nuova Sardegna](#)
- [La Nuova Venezia](#)
- [La Provincia Pavese](#)
- [La Sentinella del Canavese](#)
- [La Tribuna di Treviso](#)
- [Messaggero Veneto](#)
- [Il Bò](#)

▪ **Periodici**

- [l'Espresso](#)
- [Espresso - Food and Wine](#)
- [Le Scienze](#)
- [National Geographic](#)
- [Micromega](#)
- [Chiesa.it](#)
- [Limes](#)

▪ **Radio**

- [Capital](#)

La Repubblica.it - Homepage

file:///F:/Nuova%20cartella/index.html

la Repubblica | Mobile | Facebook

Venerdì 25 marzo 2011 - Aggiornato alle 17.11

L'Espresso | Network

EDIZIONI LOCALI: BARI - BOLOGNA - FIRENZE - GENOVA - MILANO - NAPOLI - PALERMO - PARMA - ROMA - TORINO

Home Pubblico Affari&Finanza Sport Spettacoli&Cultura Motori Viaggi Moda Casa Salute Meteo Lavoro Annunci

Repubblica TV Cronaca Esteri Scienze Tecnologia Ambiente Scuola&Giovani Repubblica@Scuola Mondo Solidale Ora per Ora Foto

Libia, nuovo duello tra Italia e Francia

Frattini a Sarkozy: "Anche noi abbiamo idee" Diario Tripoli: "Messinscena del regime" - Tv

DIRETTA. Accordo a Bruxelles, all'Alleanza guida dell'intera missione. Frattini: "Operativo da lunedì". Berlusconi soddisfatto (video). Parigi: Con Londra lavoriamo a soluzione politica. La secca risposta della Farnesina. Assedio a Misurata (video), i ribelli denunciano: "Massacro di civili" dall'inviato VINCENZO NICRO

► Onu, nasce l'asse dei "Bric" di F. RAMPINI ► La dietrologia dell'assurdo

Anche la Siria in fiamme, 20 morti

Decine arresti a Damasco - Video

Oltre 50 feriti in scontri in Giordania

Marcia per portare sostegno alla città assediata di Dara. Manifestazioni anti-regime anche nella capitale, a Homs e Qamishli: la polizia spara. Abbattute statue di Assad che ieri aveva annunciato riforme. Yemen, fallite le trattative con i ribelli

Parmalat, su scalata Lactalis la procura apre un'inchiesta

I pm di Milano indagano sull'acquisizione da parte del gruppo transalpino delle quote detenute dai fondi esteri. Alla vigilia del decreto del governo frena-Opa, i francesi avevano rastrellato il 29% delle azioni dell'azienda italiana. L'ad Bondi (nella foto) sentito come teste

Giustizia, l'allarme dei magistrati

"Leggi piegate a interessi di parte"

Durissima nota dei vertici dell'Anm. "Prescrizione breve incostituzionale, viola principio di uguaglianza". "Norma su responsabilità delle toghe assurda e disorganica, è un atto di aggressione". "Il vero disegno è colpire i giudici"

OGGI IN PUBBLICO

LA SITUAZIONE

I magistrati vanno al contrattacco nel mirino il premier

Continua

IPOTERI

POTERI INVISIBILI
Luchiano Galasso

REPUBLICA DOMANI

Perché il governo rimpiange Gheddafi

Cinema Società Il caso

Metti un figlio e un padre asceta sotto un albero

Dall'ultimo libro di Tiziano Terzani, scrittore-mito, un film con Bruno Ganz ed Elio Germano (foto). Il "vero" figlio: "Mio padre era un pellegrino a pagamento" di C. MORGOGLIONE **Interviste**

TABLET MANIA

Video L'iPad2 sbarca in Italia c'è chi ha fatto 24 ore di fila FOTO L'attesa a Milano Ecco la nostra prova

TVZAP

Avanzi, venti anni fa satira che non invecchia TUTTI I TORMENTONI

L'INTERATTIVO

Domani sera l'ora legale lancette avanti di 60 minuti

IL CONCORSO

World Press Photo

traffico.pcap - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Info
1927	14.000636	209.85.229.102	137.204.231.102	TCP	http > saism [ACK] Seq=1 Ack=480 win=6432 Len=0
1928	14.013735	3comeuro.of:7b:fa	137.204.231.102	STP	Spanning-tree-(for-br) Conf. Root = 32768/0/00:1ec1:0f:7b:c9 Cost = 0 Port = 0x8031
1929	14.060850	209.85.229.102	137.204.231.102	HTTP	HTTP/1.1 200 OK (text/javascript)
1930	14.236765	137.204.231.102	209.85.229.102	TCP	saism > http [ACK] Seq=480 Ack=363 win=64150 Len=0
1931	15.206586	137.204.231.102	209.85.229.102	HTTP	GET /complete/search?output=firefox&client=firefox&hl=it&q=bo HTTP/1.1\r\n
1932	15.209162	209.85.229.102	137.204.231.102	TCP	http > saism [ACK] Seq=363 Ack=960 win=7504 Len=0
1933	15.240253	209.85.229.102	137.204.231.102	HTTP	HTTP/1.1 200 OK (text/javascript)
1934	15.343272	137.204.231.102	209.85.229.102	TCP	saism > http [ACK] Seq=960 Ack=717 win=63796 Len=0
1935	16.174746	3comeuro.of:7b:fa	137.204.231.102	STP	Spanning-tree-(for-br) Conf. Root = 32768/0/00:1ec1:0f:7b:c9 Cost = 0 Port = 0x8031
1936	16.192736	137.204.231.102	209.85.229.102	HTTP	GET /complete/search?output=firefox&client=firefox&hl=it&q=bo1 HTTP/1.1\r\n
1937	16.228075	209.85.229.102	137.204.231.102	HTTP	HTTP/1.1 200 OK (text/javascript)
1938	16.349188	137.204.231.102	209.85.229.102	TCP	saism > http [ACK] Seq=1441 Ack=1080 win=63433 Len=0

[Time delta from previous displayed frame: 0.969821000 seconds]
[Time since reference or first frame: 15.206586000 seconds]
Frame Number: 1931
Frame Length: 534 bytes
Capture Length: 534 bytes
[Frame is marked: False]
[Protocols in frame: eth:ip:tcp:http]
[Coloring rule Name: HTTP]
[Coloring rule String: http || tcp.port == 80]

- Ethernet II, Src: AsustekC_74:a0:cc (00:23:54:74:a0:cc), Dst: All-HSRP-routers_c8 (00:00:0c:07:ac:c8)
- Internet Protocol, Src: 137.204.231.102 (137.204.231.102), Dst: 209.85.229.102 (209.85.229.102)
- Transmission Control Protocol, Src Port: saism (1436), Dst Port: http (80), Seq: 480, Ack: 363, Len: 480
- Hypertext Transfer Protocol
 - GET /complete/search?output=firefox&client=firefox&hl=it&q=bo HTTP/1.1\r\n
 - [Expert Info (Chat/Sequence): GET /complete/search?output=firefox&client=firefox&hl=it&q=bo HTTP/1.1\r\n]
 - Request Method: GET
 - Request URI: /complete/search?output=firefox&client=firefox&hl=it&q=bo
 - Request Version: HTTP/1.1
 - Host: suggestqueries.google.com\r\n

```

0000 00 00 0c 07 ac c8 00 23 54 74 a0 cc 08 00 45 00 .....#Tt...E
0001 02 08 23 9b 40 00 00 06 ad 65 89 cc e7 66 d1 55 .f...P.....P
0002 e5 66 05 9c 20 50 19 51 e4 99 b2 b8 6f 0c 50 18 .f...P.....P
0003 fa 96 c6 fc 00 00 47 45 54 20 2f 63 6f 6d 70 6c .....GET/compl
0004 65 74 65 2f 73 65 61 72 63 68 3f 6f 75 74 70 75 ete/sear ch?outpu
0005 74 3d 66 69 72 65 66 6f 78 26 63 6c 69 65 6e 74 t=firefo xclient
0006 3d 66 69 72 65 66 6f 78 26 68 6c 3d 69 74 26 71 =firefox &hl=it&q
0007 3d 62 6f 20 48 54 54 50 2f 31 2e 31 0d 0a 48 6f =bo HTTP /1.1..Ho
0008 73 74 3a 20 73 75 67 67 65 72 74 75 65 72 69 st: sugg estquert
0009 65 73 2e 67 6f 67 6c 65 2e 63 6f 6d 0d 0a 55 es.google e.com..U
000a 73 65 72 2d 41 67 65 6e 74 3a 20 4d 6f 7a 69 6c ser-Agen t: Mozil
000b 6c 61 2f 35 2e 30 20 28 57 69 6e 64 6f 77 73 20 la/5.0 ( windows
000c 4e 54 20 3e 31 3b 20 72 76 3a 32 3e 30 29 20 NT 5.1: rv:2.0)
000d 47 65 63 6b 2f 32 30 31 30 30 31 30 31 20 46e gecko/20 100101 F
000e 69 72 65 66 6f 78 2f 34 2e 30 0d 0a 41 63 63 65 irefox/4 0..acce
000f 70 74 3a 20 74 65 78 74 2f 68 74 6d 6c 2c 61 70 pt: text /html,ap
0010 70 6c 69 63 61 74 69 6f 6e 2f 78 68 74 6d 6c 2b plicatio n/xhtml+
0011 78 6d 6c 2c 61 70 70 6c 69 63 61 74 69 6f 6e 2f xml,appl ication/
0012 78 6d 6c 3f 71 3d 30 2e 39 2c 2a 2f 2a 3b 71 3d 0.8..Acc ept-Lang
0013 30 2e 38 0d 0a 41 63 63 65 70 74 2d 4c 61 6e 67 0.8..Acc ept-Lang
0014 75 61 67 65 3a 20 69 74 0d 0a 41 63 63 65 70 74 uage: it ..Accept
0015 2d 45 6e 63 6f 64 69 6e 67 3a 20 67 7a 69 70 2c -Encodin g: gzip,
0016 20 64 65 66 6c 61 74 65 0d 0a 41 63 63 65 70 74 deflate ..accept
0017 2d 43 68 61 72 73 65 74 3a 20 49 53 4f 2d 38 38 -charset : tso-88
0018 35 39 2d 31 2c 75 74 6e 2d 38 3b 71 3d 30 2e 37 59-1,utf -8;q=0.7
  
```

File: F:\12345\Diadica(2011 - UniCT - IP\traff... Packets: 3688 Displayed: 3688 Marked: 0

Profile: Default

Follow TCP Stream

Stream Content

```

GET /complete/search?output=firefox&client=firefox&hl=it&q=b HTTP/1.1
Host: suggestqueries.google.com
User-Agent: Mozilla/5.0 (windows NT 5.1; rv:2.0) Gecko/20100101 Firefox/4.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: it
Accept-Encoding: gzip, deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Cookie: PREF=ID=9d4c3347c01ec0a2:TM=1301069589:LM=1301069589:S=imsJnGBzrFzKfE

HTTP/1.1 200 OK
Date: Fri, 25 Mar 2011 16:13:16 GMT
Expires: Fri, 25 Mar 2011 16:13:16 GMT
Cache-Control: private, max-age=3600
Content-Type: text/javascript; charset=UTF-8
Content-Encoding: gzip
Server: gws
Content-Length: 92
X-XSS-Protection: 1; mode=block

.....-A
.....
.H./\A...m4.6.0.4$bf..ry..B./.....)..@b_ppQ.<.....Ohj.e... GET /complete/search?output=firefox&client=firefox&hl=it&q=b HTTP/1.1
Host: suggestqueries.google.com
User-Agent: Mozilla/5.0 (windows NT 5.1; rv:2.0) Gecko/20100101 Firefox/4.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: it
Accept-Encoding: gzip, deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Cookie: PREF=ID=9d4c3347c01ec0a2:TM=1301069589:LM=1301069589:S=imsJnGBzrFzKfE

HTTP/1.1 200 OK
Date: Fri, 25 Mar 2011 16:13:17 GMT
Expires: Fri, 25 Mar 2011 16:13:17 GMT
Cache-Control: private, max-age=3600
Content-Type: text/javascript; charset=UTF-8
Content-Encoding: gzip
Server: gws
Content-Length: 84
X-XSS-Protection: 1; mode=block

.....VJ.W.....y.J:@VNN.BbiD>..&....2K.s2.....Oq...t.D-6D>9.L+.....z.d... GET /complete/search?output=firefox&client=firefox&hl=it&q=bo1
HTTP/1.1
Host: suggestqueries.google.com
User-Agent: Mozilla/5.0 (windows NT 5.1; rv:2.0) Gecko/20100101 Firefox/4.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: it
Accept-Encoding: gzip, deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Cookie: PREF=ID=9d4c3347c01ec0a2:TM=1301069589:LM=1301069589:S=imsJnGBzrFzKfE

HTTP/1.1 200 OK
Date: Fri, 25 Mar 2011 16:13:18 GMT
Expires: Fri, 25 Mar 2011 16:13:18 GMT
Cache-Control: private, max-age=3600
Content-Type: text/javascript; charset=UTF-8
Content-Encoding: gzip
Server: gws
Content-Length: 93
X-XSS-Protection: 1; mode=block

```

Find Save As Print Entire conversation (5909 bytes) [] ASCII [] EBCDIC [] Hex Dump [] C Arrays [] Raw

Help Filter Out This Stream Close

traffic.pcap - Wireshark

Filter: tcp.stream eq 155

No.	Time	Source	Destination	Protocol	Info
1923	13.938306	137.204.231.102	209.85.229.102	TCP	saism > http [SYN] Seq=0 win=64512 Len=0 MSS=1460
1924	13.970536	209.85.229.102	137.204.231.102	TCP	http > saism [SYN, ACK] Seq=0 Ack=1 Win=5840 Len=0 MSS=1460
1925	13.970580	137.204.231.102	209.85.229.102	TCP	saism > http [ACK] Seq=1 Ack=1 Win=64512 Len=0
1926	13.970672	137.204.231.102	209.85.229.102	HTTP	GET /complete/search?output=firefox&client=firefox&hl=it&q=b HTTP/1.1
1927	14.000636	209.85.229.102	137.204.231.102	TCP	http > saism [ACK] Seq=1 Ack=480 Win=6432 Len=0
1929	14.060850	209.85.229.102	137.204.231.102	HTTP	HTTP/1.1 200 OK (text/javascript)
1930	14.236765	137.204.231.102	209.85.229.102	TCP	saism > http [ACK] Seq=480 Ack=363 Win=64150 Len=0
1931	15.206586	137.204.231.102	209.85.229.102	HTTP	GET /complete/search?output=firefox&client=firefox&hl=it&q=bo HTTP/1.
1932	15.209162	209.85.229.102	137.204.231.102	TCP	http > saism [ACK] Seq=363 Ack=960 Win=7504 Len=0
1933	15.240253	209.85.229.102	137.204.231.102	HTTP	HTTP/1.1 200 OK (text/javascript)
1934	15.343272	137.204.231.102	209.85.229.102	TCP	saism > http [ACK] Seq=960 Ack=717 Win=63796 Len=0
1936	16.192736	137.204.231.102	209.85.229.102	HTTP	GET /complete/search?output=firefox&client=firefox&hl=it&q=bo1 HTTP/1

[Coloring Rule string: http || tcp.port == 80]

- Ethernet II, Src: All-HSRP-routers_c8 (00:00:0c:07:ac:c8), Dst: Asustek_c8_74:a0:cc (00:23:54:74:a0:cc)
- Internet Protocol, Src: 209.85.229.102 (209.85.229.102), Dst: 137.204.231.102 (137.204.231.102)
- Transmission Control Protocol, Src Port: http (80), Dst Port: saism (1436), Seq: 363, Ack: 960, Len: 354
- Hypertext Transfer Protocol
 - HTTP/1.1 200 OK\r\n
 - [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
 - Request Version: HTTP/1.1
 - Response Code: 200
 - Date: Fri, 25 Mar 2011 16:13:17 GMT\r\n
 - Expires: Fri, 25 Mar 2011 16:13:17 GMT\r\n
 - Cache-Control: private, max-age=3600\r\n
 - Content-Type: text/javascript; charset=UTF-8\r\n
 - Content-Encoding: gzip\r\n
 - Server: gws\r\n
 - Content-Length: 84\r\n
 - X-XSS-Protection: 1; mode=block\r\n
 - \r\n
 - Content-encoded entity body (gzip): 84 bytes -> 100 bytes
 - Line-based text data: text/javascript
 - ["bo", ["booking", "bollo auto", "bol", "borsa italiana", "bose", "borsa", "bologna", "book", "bosch", "bow"]]

Frame (408 bytes) Uncompressed entity body (100 bytes)

Text item 0, 84 bytes Packets: 3688 Displayed: 34 Marked: 0 Profile: Default

traffico.pcap - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: tcp.stream eq 155

No.	Time	Source	Destination	Protocol	Info
1923	13.938306	137.204.231.102	209.85.229.102	TCP	saism > http [SYN] Seq=0 Win=64512 Len=0 MSS=1460
1924	13.970536	209.85.229.102	137.204.231.102	TCP	http > saism [SYN, ACK] Seq=0 Ack=1 Win=5840 Len=0 MSS=1460
1925	13.970580	137.204.231.102	209.85.229.102	TCP	saism > http [ACK] Seq=1 Ack=1 Win=64512 Len=0
1926	13.970672	137.204.231.102	209.85.229.102	HTTP	GET /complete/search?output=firefox&client=firefox&hl=it&q=b HTTP/1.1
1927	14.000636	209.85.229.102	137.204.231.102	TCP	http > saism [ACK] Seq=1 Ack=480 Win=6432 Len=0
1929	14.060850	209.85.229.102	137.204.231.102	HTTP	HTTP/1.1 200 OK (text/javascript)
1930	14.236765	137.204.231.102	209.85.229.102	TCP	saism > http [ACK] Seq=480 Ack=363 Win=64150 Len=0
1931	15.206586	137.204.231.102	209.85.229.102	HTTP	GET /complete/search?output=firefox&client=firefox&hl=it&q=bo HTTP/1.1
1932	15.209162	209.85.229.102	137.204.231.102	TCP	http > saism [ACK] Seq=363 Ack=960 Win=7504 Len=0
1933	15.240253	209.85.229.102	137.204.231.102	HTTP	HTTP/1.1 200 OK (text/javascript)
1934	15.343272	137.204.231.102	209.85.229.102	TCP	saism > http [ACK] Seq=960 Ack=717 Win=63796 Len=0
1936	16.192736	137.204.231.102	209.85.229.102	HTTP	GET /complete/search?output=firefox&client=firefox&hl=it&q=bo HTTP/1.1

[Coloring Rule string: http || tcp.port == 80]

- Ethernet II, Src: All-HSRP-routers_c8 (00:00:0c:07:ac:c8), Dst: AsustekC_74:a0:cc (00:23:54:74:a0:cc)
- Internet Protocol, Src: 209.85.229.102 (209.85.229.102), Dst: 137.204.231.102 (137.204.231.102)
- Transmission Control Protocol, Src Port: http (80), Dst Port: saism (1436), Seq: 363, Ack: 960, Len: 354
- Hypertext Transfer Protocol
 - HTTP/1.1 200 OK\r\n
 - [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
 - Request Version: HTTP/1.1
 - Response Code: 200
 - Date: Fri, 25 Mar 2011 16:13:17 GMT\r\n
 - Expires: Fri, 25 Mar 2011 16:13:17 GMT\r\n
 - Cache-Control: private, max-age=3600\r\n
 - Content-Type: text/javascript; charset=UTF-8\r\n
 - Content-Encoding: gzip\r\n
 - Server: gws\r\n
 - Content-Length: 84\r\n
 - X-XSS-Protection: 1; mode=block\r\n
 - \r\n
 - Content-encoded entity body (gzip): 84 bytes -> 100 bytes
 - Line-based text data: text/javascript
 - ["bo", ["booking", "bollo auto", "bol", "borsa italiana", "bose", "borsa", "bologna", "book", "bosch", "bow"]]

```

0000 5b 22 62 6f 22 2c 5b 22 62 6f 6f 6b 69 6e 67 22  [ "bo", [ "booking"
0010 2c 22 62 6f 6c 6c 6f 20 61 75 74 6f 22 2c 22 62  [ "bollo auto", "b
0020 6f 6c 22 2c 22 62 6f 72 73 61 20 69 74 61 6c 69  [ ol", "bor sa itali
0030 61 6e 61 22 2c 22 62 6f 73 65 22 2c 22 62 6f 72  [ ana", "bo se", "bor
0040 73 61 22 2c 22 62 6f 6c 6f 67 6e 61 22 2c 22 62  [ sa", "bol ogna", "b
0050 6f 6f 6b 22 2c 22 62 6f 73 63 68 22 2c 22 62 6f  [ ook", "bo sch", "bo
0060 77 22 5d 5d  [ w"] ]

```

Frame (408 bytes) Uncompressed entity body (100 bytes)

Text item 0, 100 bytes Packets: 3688 Displayed: 34 Marked: 0 Profile: Default

Estrazione di dati dall'intercettazione

traffic.pcap - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: Expression... Clear Apply

No. -	Time	Source	Destination	Protocol	Info
166	3.145791	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
167	3.146224	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
168	3.146255	137.204.231.102	213.92.16.171	TCP	igi-lm > http [ACK] Seq=756 Ack=4666 win=64512 Len=0
169	3.150949	213.92.16.171	137.204.231.102	TCP	http > hiq [ACK] Seq=2197 Ack=692 win=7504 Len=0
170	3.151376	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
171	3.151807	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
172	3.151821	137.204.231.102	213.92.16.171	TCP	af > http [ACK] Seq=404 Ack=5841 win=64512 Len=0
173	3.152237	137.204.231.102	137.204.231.102	HTTP	HTTP/1.1 200 OK (PNG)
174	3.152325	137.204.231.102	213.92.16.171	HTTP	GET /images/2011/03/25/161210851-271b7d22-bde9-455a-9984-7f2ebfc27aa3
175	3.152670	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
176	3.153097	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]

Frame 173 (78 bytes on wire, 78 bytes captured)
 Arrival Time: Mar 25, 2011 17:13:01.496156000
 [Time delta from previous captured frame: 0.000416000 seconds]
 [Time delta from previous displayed frame: 0.000416000 seconds]
 [Time since reference or first frame: 3.152237000 seconds]
 Frame Number: 173
 Frame Length: 78 bytes
 Capture Length: 78 bytes
 [Frame is marked: False]
 [Protocols in frame: eth:ip:tcp:http:png]
 [Coloring Rule Name: HTTP]
 [Coloring Rule String: http || tcp.port == 80]

Ethernet II, Src: All-MSRP-routers_c8 (00:00:0c:07:ac:c8), Dst: AsustekC_74:a0:cc (00:23:54:74:a0:cc)
 Internet Protocol, Src: 213.92.16.171 (213.92.16.171), Dst: 137.204.231.102 (137.204.231.102)
 Transmission Control Protocol, Src Port: http (80), Dst Port: af (1411), Seq: 5841, Ack: 404, Len: 24
 [Reassembled TCP segments (5864 bytes): #160(1460), #161(1460), #170(1460), #171(1460), #173(24)]
 Hypertext Transfer Protocol

HTTP/1.1 200 OK\r\n

[Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
 Request Version: HTTP/1.1
 Response Code: 200

```

0000 48 54 54 50 2f 31 2e 31 20 32 30 30 20 4f 4b 0d  HTTP/1.1 200 OK.
0010 0a 53 65 72 76 65 72 3a 20 41 70 61 63 68 65 0d  .Server: Apache.
0020 0a 4c 61 73 74 2d 4d 6f 64 69 66 69 65 64 3a 20  .Last-Modified:
0030 54 68 75 2c 20 31 37 20 4d 61 72 20 32 30 31 31  Thu, 17 Mar 2011
0040 20 32 3a 35 32 3a 32 36 20 47 4d 54 0d 0a 45 22:52:26 GMT.
0050 54 61 67 3a 20 22 31 35 36 38 2d 3a 39 65 62 35  Tag: "15 68-49e5
0060 38 33 66 33 66 64 32 32 22 0d 0a 43 61 63 68 65 83f3fd22".
0070 2d 43 6f 6e 74 72 6f 6c 3a 20 6d 61 78 2d 61 67  -Control: max-
0080 65 3d 38 36 34 30 30 2c 20 70 75 62 6c 69 63 0d  e=86400, public;
0090 0a 45 78 70 69 72 65 73 3a 20 53 61 74 2c 20 32  .Expires: Sat, 2
00a0 3e 20 4d 61 72 20 32 30 31 31 20 31 30 3a 31 38 6 Mar 20 11 10:18
00b0 3a 33 36 20 47 4d 54 0d 0a 58 2d 4d 79 48 6f 73 :36 GMT.
00c0 74 6e 61 6d 65 3a 20 32 36 2c 20 31 39 30 0d 0a  .X-MyHos
00d0 43 6f 6e 74 65 6e 74 2d 54 79 70 65 3a 20 69 6d  tname: 2 6, 190.
00e0 61 62 65 7f 70 6e 67 0d 0a 58 2d 43 61 63 68 65  -Control: max-
00f0 61 62 65 3a 20 59 45 53 0d 0a 43 6f 6e 74 65 65  able: YE S. Conte
0100 6e 74 2d 4c 65 6e 67 74 68 3a 20 35 34 38 30 0d  nt-Length: 5480.
0110 0a 44 61 74 65 3a 20 46 72 69 2c 20 32 35 20 4d  .Date: Fri, 25 M
0120 61 72 20 32 30 31 31 20 31 36 3a 31 33 3a 30 35  ar 2011 16:13:05
0130 20 47 4d 54 0d 0a 41 67 65 3a 20 32 31 32 36 39  GMT.
0140 0d 0a 42 6f 6e 65 63 74 60 6f 6e 62 30 20 6b 65  .Content-Type:
  
```

Frame (78 bytes) Reassembled TCP (5864 bytes)

Text item 0, 17 bytes

Packets: 3688 Displayed: 3688 Marked: 0

Profile: Default

traffic.pcap - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: Expression... Clear Apply

No. -	Time	Source	Destination	Protocol	Info
166	3.145791	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
167	3.146224	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
168	3.146255	137.204.231.102	213.92.16.171	TCP	igi-lm > http [ACK] Seq=756 Ack=4666 win=64512 Len=0
169	3.150949	213.92.16.171	137.204.231.102	TCP	http > hiq [ACK] Seq=2197 Ack=692 win=7504 Len=0
170	3.151376	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
171	3.151807	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
172	3.151821	137.204.231.102	213.92.16.171	TCP	af > http [ACK] Seq=404 Ack=5841 win=64512 Len=0
173	3.152237	137.204.231.102	137.204.231.102	HTTP	HTTP/1.1 200 OK (PNG)
174	3.152325	137.204.231.102	213.92.16.171	HTTP	GET /images/2011/03/25/161210851-271b7d22-bde9-455a-9984-7f2ebfc27aa3
175	3.152670	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
176	3.153097	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]

Frame 173 (78 bytes on wire, 78 bytes captured)
 Arrival Time: Mar 25, 2011 17:13:01.496156000
 [Time delta from previous captured frame: 0.000416000 seconds]
 [Time delta from previous displayed frame: 0.000416000 seconds]
 [Time since reference or first frame: 3.152237000 seconds]
 Frame Number: 173
 Frame Length: 78 bytes
 Capture Length: 78 bytes
 [Frame is marked: False]
 [Protocols in frame: eth:ip:tcp:http:png]
 [Coloring Rule Name: HTTP]
 [Coloring Rule String: http || tcp.port == 80]

Ethernet II, Src: All-MSRP-routers_c8 (00:00:0c:07:ac:c8), Dst: AsustekC_74:a0:cc (00:23:54:74:a0:cc)
 Internet Protocol, Src: 213.92.16.171 (213.92.16.171), Dst: 137.204.231.102 (137.204.231.102)
 Transmission Control Protocol, Src Port: http (80), Dst Port: af (1411), Seq: 5841, Ack: 404, Len: 24
 [Reassembled TCP segments (5864 bytes): #160(1460), #161(1460), #170(1460), #171(1460), #173(24)]
 Hypertext Transfer Protocol

HTTP/1.1 200 OK\r\n

[Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
 Request Version: HTTP/1.1
 Response Code: 200

```

0000 48 54 54 50 2f 31 2e 31 20 32 30 30 20 4f 4b 0d  HTTP/1.1 200 OK.
0010 0a 53 65 72 76 65 72 3a 20 41 70 61 63 68 65 0d  .Server: Apache.
0020 0a 4c 61 73 74 2d 4d 6f 64 69 66 69 65 64 3a 20  .Last-Modified:
0030 54 68 75 2c 20 31 37 20 4d 61 72 20 32 30 31 31  Thu, 17 Mar 2011
0040 20 32 3a 35 32 3a 32 36 20 47 4d 54 0d 0a 45 22:52:26 GMT.
0050 54 61 67 3a 20 22 31 35 36 38 2d 3a 39 65 62 35  Tag: "15 68-49e5
0060 38 33 66 33 66 64 32 32 22 0d 0a 43 61 63 68 65 83f3fd22".
0070 2d 43 6f 6e 74 72 6f 6c 3a 20 6d 61 78 2d 61 67  -Control: max-
0080 65 3d 38 36 34 30 30 2c 20 70 75 62 6c 69 63 0d  e=86400, public;
0090 0a 45 78 70 69 72 65 73 3a 20 53 61 74 2c 20 32  .Expires: Sat, 2
00a0 3e 20 4d 61 72 20 32 30 31 31 20 31 30 3a 31 38 6 Mar 20 11 10:18
00b0 3a 33 36 20 47 4d 54 0d 0a 58 2d 4d 79 48 6f 73 :36 GMT.
00c0 74 6e 61 6d 65 3a 20 32 36 2c 20 31 39 30 0d 0a  .X-MyHos
00d0 43 6f 6e 74 65 6e 74 2d 54 79 70 65 3a 20 69 6d  tname: 2 6, 190.
00e0 61 62 65 2f 70 6e 67 0d 0a 58 2d 43 61 63 68 65  -Control: max-
00f0 61 62 65 3a 20 59 45 53 0d 0a 43 6f 6e 74 65 65  able: YE S. Conte
0100 6e 74 2d 4c 65 6e 67 74 68 3a 20 35 34 38 30 0d  nt-Length: 5480.
0110 0a 44 61 74 65 3a 20 46 72 69 2c 20 32 35 20 4d  .Date: Fri, 25 M
0120 61 72 20 32 30 31 31 20 31 36 3a 31 33 3a 30 35  ar 2011 16:13:05
0130 20 47 4d 54 0d 0a 41 67 65 3a 20 32 31 32 36 39  GMT.
0140 0d 0a 42 6f 6e 65 63 74 60 6f 6e 62 30 20 6b 65  .Content-Type:
  
```

Frame (78 bytes) Reassembled TCP (5864 bytes)

Text item 0, 17 bytes

Packets: 3688 Displayed: 3688 Marked: 0

Profile: Default

Start | traffic.pcap - Wiresh... | F:\12345\Didatca\2011... | Microsoft PowerPoint - [...]

17.32

Follow TCP Stream

Stream Content:

GET /static/images/homepage/2010/1a-repubblica-logo-home-payoff.png HTTP/1.1
www.repubblica.it
User-Agent: Mozilla/5.0 (X11; Linux i686; rv:1.9.2.13) Gecko/20100309 Firefox/4.0
Accept: image/png, image/*; q=0.8, /*; q=0.5
Accept-Language: it
Accept-Encoding: gzip, deflate
Accept-Charset: iso-8859-1, utf-8; q=0.7, /*; q=0.7
Keep-Alive: 113
Connection: keep-alive
Referer: http://www.repubblica.it/

HTTP/1.1 200 OK
Server: Apache
Last-Modified: Thu, 17 Mar 2011 22:52:26 GMT
ETag: "1568-49eb583f3fd22"
Cache-Control: max-age=86400, public
Expires: Sat, 26 Mar 2011 10:18:36 GMT
X-MyHostname: 26, 190
Content-Type: image/png
X-Cacheable: YES
Content-Length: 5480
Date: Fri, 25 Mar 2011 16:13:05 GMT
Age: 21269
Connection: keep-alive
X-Cache: HIT
X-Cache-Hits: 182430

.PNG
.....
IHDR.....Z.....8.H.....tEXtSoftware:Adobe ImageReadyq.ec...ITXtXML:com.adobe.xmp....<?xpacket begin="..." id="w5M0pcehiHzresZntczkc9d"?><x:xmpmeta xmlns:x="adobe:meta" x:xmpk="Adobe XMP Core 5.0-c060 61.134777, 2010/02/12-17:32:00" ><rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#" ><rdf:Description rdf:about="" xmlns:xmp="http://ns.adobe.com/xap/1.0/" xmlns:xmpMM="http://ns.adobe.com/xap/1.0/mm/" xmlns:stRef="http://ns.adobe.com/xap/1.0/stype/ResourceRef#" xmp:CreatorTool="Adobe Photoshop CS5 Macintosh" xmpMM:InstanceID="xmp:did:977c537013511e090e6dd01263f1a0b" xmpMM:DocumentID="xmp:did:977c537013511e090e6dd01263f1a0b" <xmp:derivedFrom stRef:instanceID="xmp:did:977c536f013511e090e6dd01263f1a0b" stRef:documentID="xmp:did:977c537013511e090e6dd01263f1a0b"/></rdf:Description></rdf:RDF></x:xmpmeta></xpacket end="..."?>
>..WS....PLT...@...A.....
.....
0000.....PPP...ppp...1.....g.....a.....Q...../.....P.....#.....6R.....>^.....U.....1..&.....Mv.d.PX\p..s.....
(IDATZ.....s.H.S.....3.....@T.P.U.A.....G.....<.....<.....<.P.G.E.....!Z.....L.....J.....HzE.F.....U.....7.....Z.....R.....
..u.4.B..n.....R.M.....X.....*...pf.....?.....\.....w"j4Z.A..H.....
..G.+D..u.....
.....
..R..t.e.L.A..Q.....g.4.....HV.L.>Z.....
..1..J.....k[GT.....S.....s@&.1..7.....
{.Lw.....V.....o.....Z..V..t*U...~.....&.....S,8.....5.e.....&.X8..Uo.b...:.*.G..C..A...CM.O.A..h.Yoz.i.....L>R.L.:S.g.J.,W:3.T...p
..S.....O.D.,g.....X(Kr.x>/...PF.)\.....].....~S.UUVD...w...U..U.....
g.....f.....Xl.....Atf..f.A.(G7..7:f.....d.....
..V...d4.N.....B%..f.....p.....C.....C.....o.....Kc.....1t+.....o.S..jg.....@.....*q.....>.1.5DVm./z.-[.....&u.....)E0..18..&.....%.B.....yQ.....9"s0c.....
.....F.....>ap..7..(d..R.....A.M.....X.....Y.....(.....Qk..7.l.w.....L.....[.dp.kz..d.u.s.....5"D.....I.....).....1
].....<geu.....S.....V..UV.....2.....sm.....
.....ZS.6.w....."u".....&.....T7V.s.....}~.x
.E.....V.....9.....V..?.....{uHF.9
.....W.....w.....u.....
|].....>Lm.8VAs.....f.qiC.e.....7..V.....\.....Om%.....p1.....y.....f.....?k0./.....z
pku.....f.o.b.t.....5.F1wa.+#16.....G.....*.....;[S5F2..d.X.....&.....&ptX1...../.....N.....Y.....8.....1.....=g.w.3.<X.L...:Cja.....\br/>
%.....l..U.....@..A!..N..n.....o.....X(.#Cb.....io.....u.....X.....Z.....2.....U.D.F..5e).uY9.d5.....
%.....!W..y.....%.....[j0z!..N.....].....Z.Q1.tfb.....
[2.....3.l.H.....C.....C.....O.....C.....o.....&.....f.....f.....&.4.(7.....w.sg.M.....d..2.9.C.Q6.b.f.....
[1b].....d.OoV.]9.....008.....2.....H/kq.....
[<.....<.....q.....t.....A.....?.....?.....Q.....X6M.7.....\.....+.....0.....0T.....
.....e.m.....m.&.N 1w93.c.....4.t(C.XO.0.....Y+@z.....fs
.....(V.....C.....R.A.7.....).....+.....)9.....O.R.....R.....H.....U.....f.h.Q..h.J.....RRV.K.9C.z@.o.a.t..X.)g.....>d...c.h?Y..:0.6L
=7VPq.....q.....s.t.X.....?e.H.....X.gj.....iOf.....Iqa..#0a.k%u.....(.....1.V8.....9 ..6"bn.4v,R..\$.t3R.Yc.s)
W4..l..Rm.t.....6.w.....ew.....O.M.....XB.....A.M.....H.....A.....1.....4.#.f%.....Y.....L.....z.a..3g..9.....sU.....pk.....n.f.....r.....J.....S.loq=
..G1..r.....e.G.....z.....a.....u.....070.V8PU.l].....s.....V.....t.%L.....1.....>E.....b.....q8.h.....hz.V1.R.....)
".....
#.....
.....
.....</br>

Find Save As Print Entire conversation (214372 bytes) ASCII EBCDIC Hex Dump C Arrays Raw

Filter Out This Stream Close

traffico.pcap - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: tcp.stream eq 12 Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Info
170	3.151376	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
171	3.151807	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
172	3.151821	137.204.231.102	213.92.16.171	TCP	af > http [ACK] Seq=404 Ack=5841 win=64512 Len=0
173	3.152237	213.92.16.171	137.204.231.102	HTTP	HTTP/1.1 200 OK (PNG)
174	3.152325	137.204.231.102	213.92.16.171	HTTP	GET /images/2011/03/25/161210851-271b7d22-bde9-455a-9984-7f2ebfc27aa3
179	3.156107	213.92.16.171	137.204.231.102	TCP	http > af [ACK] Seq=5865 Ack=813 win=7504 Len=0
214	3.183201	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
215	3.189652	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
216	3.189664	137.204.231.102	213.92.16.171	TCP	af > http [ACK] Seq=813 Ack=7912 win=64512 Len=0
217	3.190081	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
218	3.190941	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
219	3.190951	137.204.231.102	213.92.16.171	TCP	af > http [ACK] Seq=813 Ack=10832 win=64512 Len=0

Server: Apache\r\n
Last-Modified: Thu, 17 Mar 2011 22:52:26 GMT\r\n
ETag: "1568-49eb583f3fd22"\r\n
Cache-Control: max-age=86400, public\r\n
Expires: sat, 26 Mar 2011 10:18:36 GMT\r\n
X-MyHostname: 26, 190\r\n
Content-type: image/png\r\n
X-Cacheable: YES\r\n
Content-Length: 5480\r\n
Date: Fri, 25 Mar 2011 16:13:05 GMT\r\n
Age: 21269\r\n
Connection: keep-alive\r\n
X-Cache: HIT\r\n
X-Cache-Hits: 182430\r\n
\r\n

Portable Network Graphics
PNG Signature: 89504E470D0A1A0A
IHDR Image Header
Len: 13
Chunk: IHDR
0..0..... = Ancillary: This is a CRITICAL chunk

0170	48 69 74 73 3a 20 31 38 32 34 33 30 0d 0a 0d 0a	Hits: 18 2430.....
0180	89 50 4e 47 0d 0a 1a 0a 00 00 00 0d 49 48 44 52	.PNG.....IHDR
0190	00 00 01 b0 00 00 00 5a 08 03 00 00 0e 38 f3Z.....8.
01a0	48 00 00 19 74 45 58 74 53 6f 6e 74 77 61 72	H.....tEXtSoftware
01b0	49 00 41 64 6f 62 65 20 49 68 6f 62 65 32 63 61	H..Adobe ImageRea
01c0	46 79 71 c9 65 3c 00 00 03 22 69 54 58 74 58 46	dyg.ec..."ITXtXML
01d0	4c 3a 63 6f 6d 2e 61 64 6f 62 65 2e 78 6d 70 00	L:com.ad obe.xmp.
01e0	00 00 00 00 3c 3f 78 70 61 63 6b 65 74 20 62 65<?x packet be
01f0	67 69 6e 3d 2e ef bb bf 22 20 69 64 3d 22 57 35	gin="..." id="w5
0200	4d 30 4d 70 43 65 68 69 48 7a 72 65 52 7a 4e 54	0M0pcehi HzresZnt
0210	63 7a 6b 63 39 64 22 3f 3e 20 3c 78 3a 78 6d 70	czkc9d"?><x:xmp
0220	6d 65 74 61 20 78 6d 6c 6e 73 3a 78 3d 22 61 64	meta xml ns:x"ad
0230	6f 62 65 3a 6e 73 3a 6d 65 74 61 2f 22 20 78 3a	obe:ns:m eta/" x:
0240	78 6d 70 74 6b 3d 22 41 64 6f 62 65 20 58 4d 50	xmpk="A obe XMP
0250	40 43 6f 72 65 20 35 2e 30 2d 63 30 36 30 20 36	Core 5. 0-c060 6
0260	31 2e 31 33 34 37 37 37 2c 20 32 30 31 30 2f 30	1.134777, 2010/0
0270	32 2f 31 32 32 31 37 3a 33 32 3a 30 30 20 20 20	2/12-17: 32:00
0280	20 20 20 20 22 3e 20 3c 72 64 66 3a 52 44 46	"><rdf:RDF
0290	20 78 6d 6c 6e 73 3a 72 64 66 3d 22 68 74 74 70	xmlns:r df="http
02a0	3a 2f 77 77 2e 77 33 2e 6f 72 67 2f 31 39	//www.w 3.org/19
02b0	20 20 3f 30 22 3f 2e 2d 2d 7e 64 66 6d 6d 6d 6d	00/02/22-11:33:00

Frame (78 bytes) Reassembled TCP (5864 bytes) Packets: 3688 Displayed: 278 Marked: 0 Profile: Default

traffico.pcap - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: tcp.stream eq 12 Expression... Clear Apply

No. -	Time	Source	Destination	Protocol	Info
170	3.151376	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
171	3.151807	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
172	3.151821	137.204.231.102	213.92.16.171	TCP	af > http [ACK] Seq=404 Ack=5841 win=64512 Len=0
173	3.152237	213.92.16.171	137.204.231.102	HTTP	HTTP/1.1 200 OK (PNG)
174	3.152325	137.204.231.102	213.92.16.171	HTTP	GET /images/2011/03/25/161210851-271b7d22-bde9-455a-9984-7f2ebfc27aa3
179	3.156107	213.92.16.171	137.204.231.102	TCP	http > af [ACK] Seq=5865 Ack=813 win=7504 Len=0
214	3.183201	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
215	3.189652	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
216	3.189664	137.204.231.102	213.92.16.171	TCP	af > http [ACK] Seq=813 Ack=7912 win=64512 Len=0
217	3.190081	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
218	3.190941	213.92.16.171	137.204.231.102	TCP	[TCP segment of a reassembled PDU]
219	3.190951	137.204.231.102	213.92.16.171	TCP	af > http [ACK] Seq=813 Ack=10832 win=64512 Len=0

ETag: "1568-49eb583f3fd22"\r\n
 Cache-control: max-age=86400, public\r\n
 Expires: Sat, 26 Mar 2011 10:18:36 GMT\r\n
 X-MyHostname: 26, 190\r\n
 Content-type: image/png\r\n
 X-cacheable: YES\r\n
 Content-Length: 5480\r\n
 Date: Fri, 25 Mar 2011 16:13:05 GMT\r\n
 Age: 21269\r\n
 Connection: keep-alive\r\n
 X-cache: HIT\r\n
 X-cache-Hits: 182430\r\n
 \r\n

Portable Network Graphics

PNG Signature: 89504E470D0A1A0A

- IHDR Image Header
- TEXT Textual data
- ITXT (don't know how to dissect this)
- PLTE (don't know how to dissect this)
- IDAT (don't know how to dissect this)
- IEND Image Trailer

0170 48 69 74 73 3a 20 31 38 32 34 33 30 0d 0a 0d
 0180 89 50 4e 47 0d 0a 1a 0a 00 00 00 0d 49 48 44
 0190 00 00 01 b0 00 00 00 5a 08 03 00 00 00 ee 38
 01a0 48 00 00 19 74 45 58 74 53 6f 66 74 77 61
 01b0 65 00 41 64 6f 62 65 20 49 6d 61 67 65 32 63
 01c0 64 79 71 c9 65 3c 00 00 03 22 69 54 58 74 58
 01d0 4c 3a 63 6f 6d 2e 61 64 6f 62 65 2e 78 6d 70
 01e0 00 00 00 00 3c 3f 78 70 61 63 66 65 74 20 62
 01f0 67 69 6e 3d 22 ef bb bf 22 20 69 64 3d 22 57
 0200 4d 30 4d 70 43 65 68 69 48 7a 72 65 37 7a 4e
 0210 63 7a 6b 63 39 64 22 3f 3e 20 3c 78 3a 78 6d
 0220 6d 65 74 61 20 78 6d 6c 6e 73 3a 78 3d 22 61
 0230 6f 62 65 3a 6e 73 3a 6d 65 74 61 2f 22 20 78
 0240 78 6d 70 74 6b 3d 22 41 64 6f 62 65 20 58 4e
 0250 20 43 6f 72 65 20 35 2e 30 2d 63 30 36 30 20
 0260 31 2e 31 33 34 37 37 37 2c 20 32 30 31 30 2f
 0270 32 2f 31 32 2d 31 37 3a 33 32 3a 30 30 20 20
 0280 20 70 20 20 22 3e 20 3c 72 64 66 3a 52 44 46
 0290 20 78 6d 6c 6e 73 3a 72 64 66 3d 22 68 74 74 70
 02a0 3a 2f 2f 77 77 2e 77 33 2e 6f 72 67 2f 31 39
 02b0 20 20 2f 20 22 3e 20 3c 72 64 66 3d 22 68 74 74 70

Frame (78 bytes) Reassembled TCP (5864 bytes)

Portable Network Graphics (png), 5480 bytes Packets: 3688 Displayed: 278 Marked: 0 Profile: Default

Wireshark: Export Raw Data

Salva in: Nuova cartella

Nome file: la-repubblica-logo-home-payoff.png

Salva come: All Files (*.*)
 Raw data (*.bin, *.dat, *.raw)
 All Files (*.*)

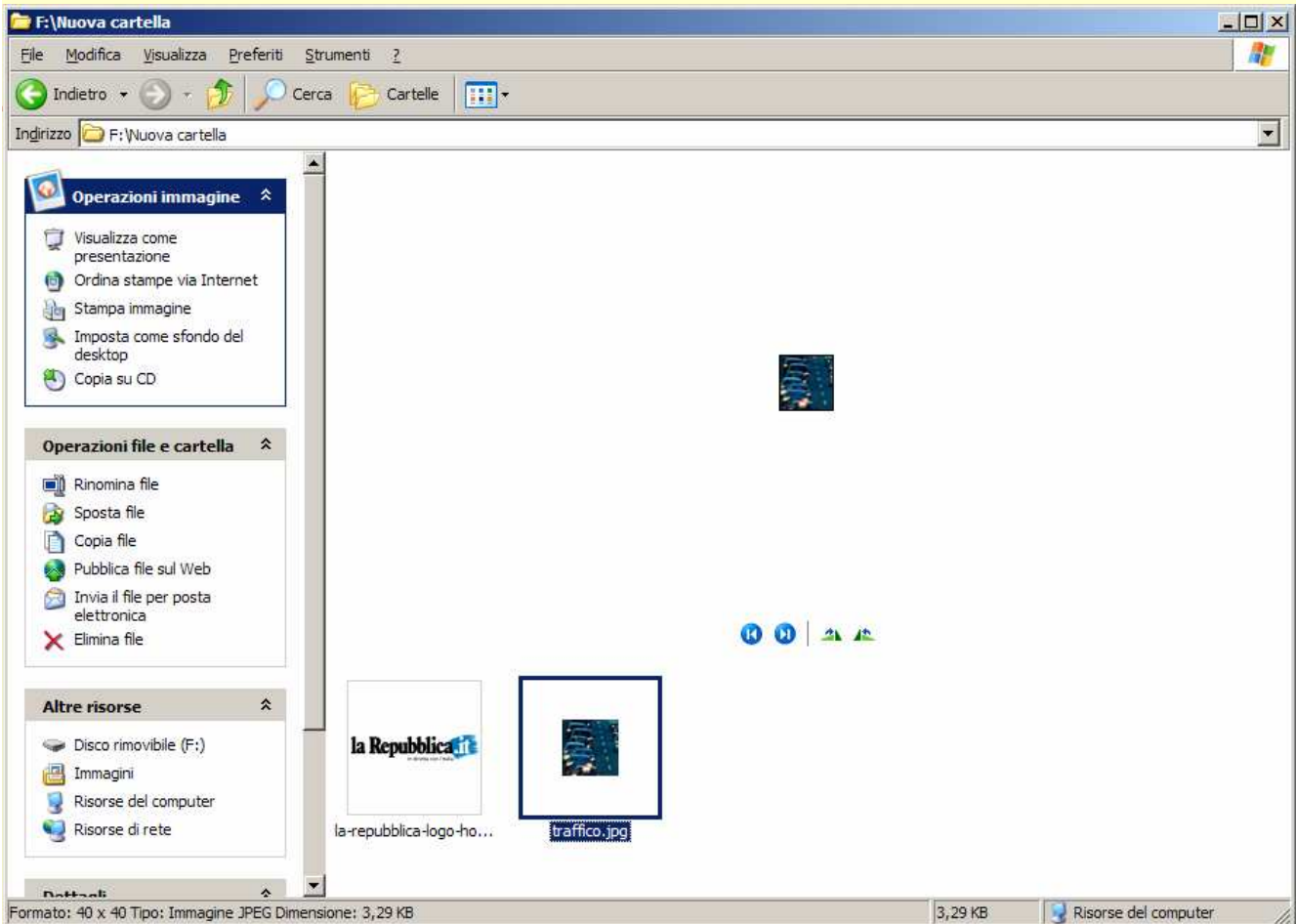
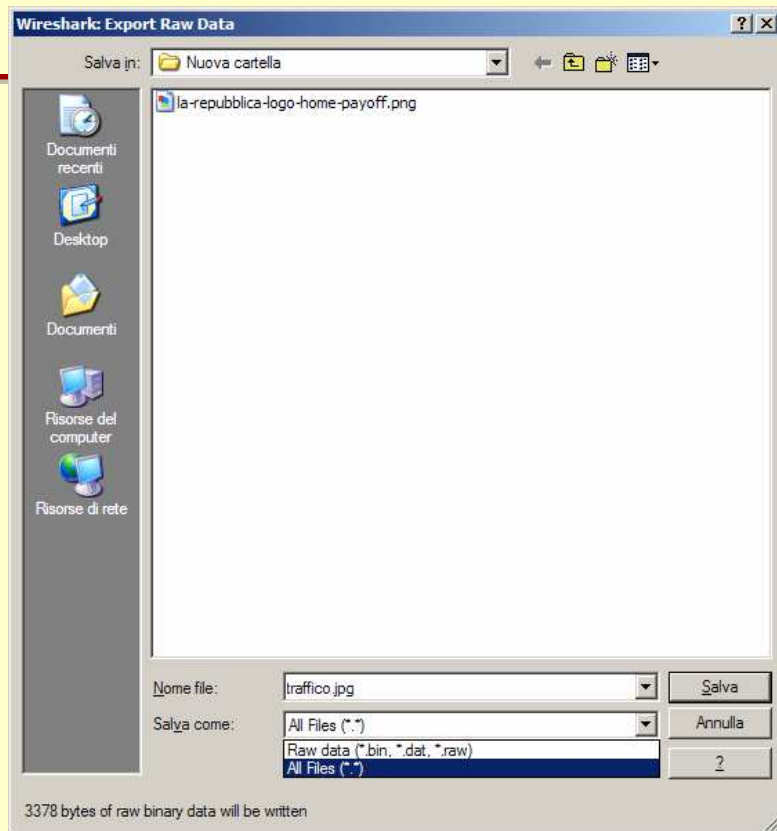
5480 bytes of raw binary data will be written



The screenshot shows the Wireshark interface with a packet capture of an HTTP GET request. The filter is 'tcp.stream eq 12'. The packet list shows a GET request for 'http://137.204.231.102/pluginskpm3/repubblica_plugin_iniziativa_editoriali/images/gif_2'. The packet details pane shows the following structure:

- Request version: HTTP/1.1
- Response Code: 200
- Server: Apache/2.2.3
- Last-Modified: Wed, 04 Aug 2010 10:09:15 GMT
- Etag: "d32-48cfea04b979a"
- cache-control: max-age=86400, public
- Expires: Sat, 26 Mar 2011 10:04:02 GMT
- X-MyHostname: 26, 186
- content-type: image/jpeg
- X-Cacheable: YES
- Content-Length: 3378
- Date: Fri, 25 Mar 2011 16:13:05 GMT
- Age: 22142
- Connection: keep-alive
- X-Cache: HIT
- X-Cache-Hits: 185937

The packet bytes pane shows the raw data of the JPEG file, including the start of the frame header and Huffman coding table. The status bar at the bottom indicates 'Frame (309 bytes) Reassembled TCP (3762 bytes)' and 'Packets: 3688 Displayed: 278 Marked: 0'.



Invio di posta elettronica

traffico-invioposta.pcap - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Info
16	3.583350	137.204.231.102	62.149.128.201	SMTP	C: cGFzc3dvcmQx
17	3.597942	62.149.128.201	137.204.231.102	SMTP	S: 235 ok, go ahead (#2.0.0)
18	3.598297	137.204.231.102	62.149.128.201	SMTP	C: MAIL FROM: <posta-1@micheleferrazzano.it>
19	3.625457	62.149.128.201	137.204.231.102	SMTP	S: 250 ok
20	3.625536	137.204.231.102	62.149.128.201	SMTP	C: RCPT TO: <posta-2@micheleferrazzano.it>
21	3.638356	62.149.128.201	137.204.231.102	SMTP	S: 250 ok
22	3.638424	137.204.231.102	62.149.128.201	SMTP	C: DATA
23	3.652559	62.149.128.201	137.204.231.102	SMTP	S: 354 go ahead
24	3.652710	137.204.231.102	62.149.128.201	SMTP	C: DATA fragment, 1236 bytes
25	3.688256	62.149.128.201	137.204.231.102	TCP	smtp > hello [ACK] seq=198 Ack=1415 win=7416 Len=0
26	3.688296	137.204.231.102	62.149.128.201	IMF	from: "Posta 1" <posta-1@micheleferrazzano.it>, subject: Mail di prova, (text/plain)
27	3.690824	62.149.128.201	137.204.231.102	TCP	smtp > hello [ACK] seq=198 Ack=1420 win=7416 Len=0
28	3.719210	62.149.128.201	137.204.231.102	SMTP	S: 250 ok 1301072520 qp 13134
29	3.719325	137.204.231.102	62.149.128.201	SMTP	C: QUIT
30	3.730392	62.149.128.201	137.204.231.102	SMTP	S: 221 smtp6.aruba.it
31	3.730467	137.204.231.102	62.149.128.201	TCP	hello > smtp [FIN, ACK] Seq=1426 Ack=246 win=64267 Len=0

Acknowledgement Number: 100 (relative ack number)
 Header length: 20 bytes
 Flags: 0x18 (PSH, ACK)
 window size: 64345
 checksum: 0x9b23 [validation disabled]
 [SEQ/ACK analysis]
 Simple Mail Transfer Protocol
 Command: MAIL FROM: <posta-1@micheleferrazzano.it>\r\n
 Command: MAIL
 Request parameter: FROM: <posta-1@micheleferrazzano.it>

```

0000 00 00 0c 07 ac c8 00 23 54 74 a0 cc 08 00 45 00  ....# Tt...E.
0010 00 53 e8 03 40 00 80 06 e2 0f 89 cc e7 66 3e 95  .S.@... ..f>.
0020 80 c9 06 fd 00 19 39 8b e7 34 cc d7 96 e8 50 18  ....9. .4...P.
0030 fb 59 9b 23 00 00 4d 41 49 4c 20 46 32 4f 4d 3a  .Y.#.MAIL FROM:
0040 20 3c 70 6f 73 74 61 2d 31 40 6d 69 63 68 65 6c  <posta-1@michel
0050 65 66 65 72 72 61 7a 7a 61 6e 6f 2e 69 74 3e 0d  eferazzano.it>.
0060 0a
  
```

Request parameter (smtp.req.parameter), 36 b... Packets: 38 Displayed: 38 Marked: 0 Load time: 0:00.625 Profile: Default

traffico-invioposta.pcap - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Info
16	3.588350	137.204.231.102	62.149.128.201	SMTP	C: cGFzc3dvcmQx
17	3.597942	62.149.128.201	137.204.231.102	SMTP	S: 235 ok, go ahead (#2.0.0)
18	3.598297	137.204.231.102	62.149.128.201	SMTP	C: MAIL FROM: <posta-1@micheleferrazzano.it>
19	3.625457	62.149.128.201	137.204.231.102	SMTP	S: 250 ok
20	3.625536	137.204.231.102	62.149.128.201	SMTP	C: RCPT TO: <posta-2@micheleferrazzano.it>
21	3.638356	62.149.128.201	137.204.231.102	SMTP	S: 250 ok
22	3.638424	137.204.231.102	62.149.128.201	SMTP	C: DATA
23	3.652559	62.149.128.201	137.204.231.102	SMTP	S: 354 go ahead
24	3.652710	137.204.231.102	62.149.128.201	SMTP	C: DATA fragment, 1236 bytes
25	3.688256	62.149.128.201	137.204.231.102	TCP	smtp > hello [ACK] seq=198 Ack=1415 win=7416 Len=0
26	3.688296	137.204.231.102	62.149.128.201	IMF	from: "Posta 1" <posta-1@micheleferrazzano.it>, subject: Mail di prova, (text/plain)
27	3.690824	62.149.128.201	137.204.231.102	TCP	smtp > hello [ACK] seq=198 Ack=1420 win=7416 Len=0
28	3.719210	62.149.128.201	137.204.231.102	SMTP	S: 250 ok 1301072520 qp 13134
29	3.719325	137.204.231.102	62.149.128.201	SMTP	C: QUIT
30	3.730392	62.149.128.201	137.204.231.102	SMTP	S: 221 smtp6.aruba.it
31	3.730467	137.204.231.102	62.149.128.201	TCP	hello > smtp [FIN, ACK] Seq=1426 Ack=246 win=64267 Len=0

Acknowledgement number: 176 (relative ack number)
Header length: 20 bytes
Flags: 0x18 (PSH, ACK)
Window size: 64337
Checksum: 0xde31 [validation disabled]
[SEQ/ACK analysis]
Simple Mail Transfer Protocol
Command: RCPT TO: <posta-2@micheleferrazzano.it>\r\n
Command: RCPT
Request parameter: TO: <posta-2@micheleferrazzano.it>

```

0000 00 00 0c 07 ac c8 00 23 54 74 a0 cc 08 00 45 00  .....# Tt...E.
0010 00 51 e8 04 40 00 80 06 e2 10 89 cc e7 66 3e 95  .Q.8...      .f>.
0020 80 c9 06 fd 00 19 39 8b e7 5f cc d7 06 f0 50 18  .....9...P.
0030 fb 51 de 31 00 00 82 48 90 54 20 54 4f 3a 20 3d  ..Q.L..RC PT TO<
0040 70 6f 73 74 61 2d 32 40 6d 69 63 68 65 6c 65 66  posta-2@ micheleF
0050 65 72 72 61 7a 61 6e 6f 2e 69 74 3e 0d 0a      errazzano.it>..
  
```

Text item (text), 41 bytes | Packets: 38 Displayed: 38 Marked: 0 Load time: 0:00.625 | Profile: Default

traffico-invioposta.pcap - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: Expression... Clear Apply

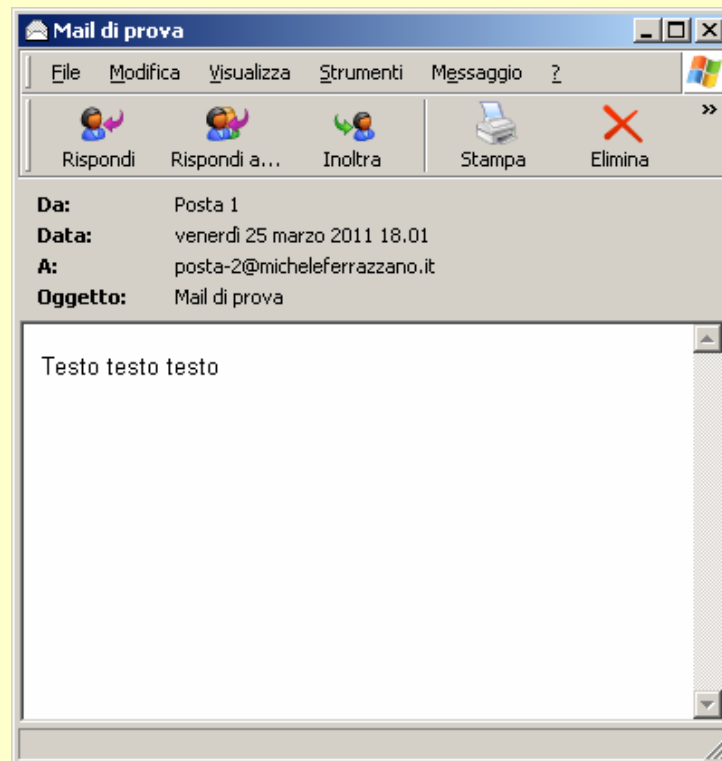
No.	Time	Source	Destination	Protocol	Info
22	3.658424	137.204.231.102	62.149.128.201	SMTP	C: DATA
23	3.652559	62.149.128.201	137.204.231.102	SMTP	S: 354 go ahead
24	3.652710	137.204.231.102	62.149.128.201	SMTP	C: DATA fragment, 1236 bytes
25	3.688256	62.149.128.201	137.204.231.102	TCP	smtp > hello [ACK] seq=198 Ack=1415 win=7416 Len=0
26	3.688296	137.204.231.102	62.149.128.201	IMF	from: "Posta 1" <posta-1@micheleferrazzano.it>, subject: Mail di prova, (text/plain)
27	3.690824	62.149.128.201	137.204.231.102	TCP	smtp > hello [ACK] seq=198 Ack=1420 win=7416 Len=0
28	3.719210	62.149.128.201	137.204.231.102	SMTP	S: 250 ok 1301072520 qp 13134
29	3.719325	137.204.231.102	62.149.128.201	SMTP	C: QUIT
30	3.730392	62.149.128.201	137.204.231.102	SMTP	S: 221 smtp6.aruba.it

Frame 24: 1290 bytes on wire (10320 bits), 1290 bytes captured (10320 bits) on
Ethernet II, Src: AsustekC_74:a0:cc (00:23:54:74:a0:cc), Dst: All-MSRP-routers_c8 (00:00:0c:07:ac:c8)
Internet Protocol, Src: 137.204.231.102 (137.204.231.102), Dst: 62.149.128.201 (62.149.128.201)
Transmission Control Protocol, Src Port: hello (1789), Dst Port: smtp (25), Seq: 179, Ack: 198, Len: 1236
Source port: hello (1789)
Destination port: smtp (25)
[Stream index: 0]
Sequence number: 179 (relative sequence number)

```

0030 fb 3b f9 24 00 00 4d 65 73 73 61 67 65 2d 49 44  .:..$me ssage-ID
0040 3a 20 3c 38 34 43 32 44 41 33 45 38 41 38 44 34  : <84C2D A3E8A8D4
0050 88 46 34 41 44 32 46 32 31 41 41 37 37 43 31 45  8F4AD2F2 1AA77C1E
0060 82 43 44 40 70 65 72 73 6f 6e 61 6c 65 2e 64 69  2CD0@pers onale.di
0070 72 2e 75 6e 69 62 6f 2e 69 74 3e 0d 0a 46 72 6f  r.unibo. it>. Fro
0080 6d 3a 20 22 50 6f 73 74 61 20 31 22 20 3c 70 6f  m: "Post a 1" <po
0090 73 74 61 2d 31 40 6d 69 63 68 65 6c 65 66 65 72  sta-1@michelefer
00a0 72 61 7a 7a 61 6e 6f 2e 69 74 3e 0d 0a 54 6f 3a  razzano. it>..To:
00b0 20 3c 70 6f 73 74 61 2d 32 40 6d 69 63 68 65 6c  <posta- 2@michel
00c0 65 66 65 72 72 61 7a 7a 61 6e 6f 2e 69 74 3e 0d  eferrazz anoit>..
00d0 0a 53 75 62 6a 65 63 74 3a 20 4d 61 69 6c 20 64  ,subject : Mail d
00e0 69 20 70 72 6f 76 61 0d 0a 44 61 74 65 3a 20 46  i prova. ,date: F
00f0 72 69 2c 20 32 35 20 4d 61 72 20 32 30 31 31 20  r1, 25 M ar 2011
0100 31 38 3a 30 31 3a 35 39 20 2b 30 31 30 30 0d 0a  18:01:59 +0100..
0110 4d 49 4d 45 2d 56 65 72 73 69 6f 6e 3a 20 31 2e  MIME-Ver sion: 1.
0120 30 0d 0a 43 6f 6e 74 65 6e 74 2d 54 79 70 65 3a  o..Conte nt-Type:
0130 20 6d 75 6c 74 69 70 61 72 74 2f 61 6c 74 65 72  multipla rt/alter
0140 6e 61 74 69 76 65 3b 0d 0a 09 62 6f 75 6e 64 61  native; ..bounda
0150 72 79 3d 22 2d 2d 2d 2d 3d 5f 4e 65 78 74 50 61  ry=----_NextPa
0160 72 74 5f 30 30 30 3f 30 30 30 43 5f 30 31 43 42  rt_000_0 00c_01CB
0170 45 42 31 36 2e 42 43 38 46 41 37 31 30 22 0d 0a  EB16.BC8 FA710...
0180 58 2d 50 72 69 6f 72 69 74 79 3a 2f 33 08 0a 58  X-Priori ty: 3..X
0190 2d 4d 53 4d 61 69 6e 2d 50 72 69 6f 72 69 74 79  _MSMail- priority
01a0 3a 20 4e 6f 72 6d 61 6c 0d 0a 58 2d 4d 61 69 6e  : Normal ..xMail
01b0 65 72 3a 20 4d 69 63 7c 6f 73 6f 66 74 20 4f 75  er: Mse soft ou
01c0 74 6f 6f 6b 20 45 78 70 72 65 73 73 20 36 2e  tlook Ex press 6.
01d0 20 2e 73 28 20 20 2e 25 20 22 23 2d 0d 0a 58 2d  00:0000 0802
  
```

Simple Mail Transfer Protocol (smtp), 1236 bytes | Packets: 38 Displayed: 38 Marked: 0 Load time: 0:00.625 | Profile: Default



```

Follow TCP Stream
Stream Content
220 smtp6.aruba.it ESMTP
EHLO cirsfidkidman
250-smtp6.aruba.it
250-AUTH LOGIN PLAIN
250-AUTH=LOGIN PLAIN
250 8BITMIME
AUTH LOGIN
334 vXN1cm5hbWU6
cG9zdGEMUBTawNoZwx1ZmVycmF6emFuby5pdA==
334 UGFzc3dvcmQ6
cGFzc3dvcmQx
235 ok, go ahead (#2.0.0)
MAIL FROM: <posta-1@micheleferrazzano.it>
250 ok
RCPT TO: <posta-2@micheleferrazzano.it>
250 ok
DATA
354 go ahead
Message-ID: <84C2DA3E8A8D48F4AD2F21AA77C1E2CD@personale.dir.unibo.it>
From: "Posta 1" <posta-1@micheleferrazzano.it>
To: <posta-2@micheleferrazzano.it>
Subject: Mail di prova
Date: Fri, 25 Mar 2011 18:01:59 +0100
MIME-Version: 1.0
Content-Type: multipart/alternative;
boundary="-----_NextPart_000_000C_01CBEB16_BC8FA710"
X-Priority: 3
X-MSMail-Priority: Normal
X-Mailer: Microsoft Outlook Express 6.00.2900.5931
X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2900.5994

This is a multi-part message in MIME format.

-----_NextPart_000_000C_01CBEB16_BC8FA710
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable

Testo testo testo

-----_NextPart_000_000C_01CBEB16_BC8FA710
Content-Type: text/html;
charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable

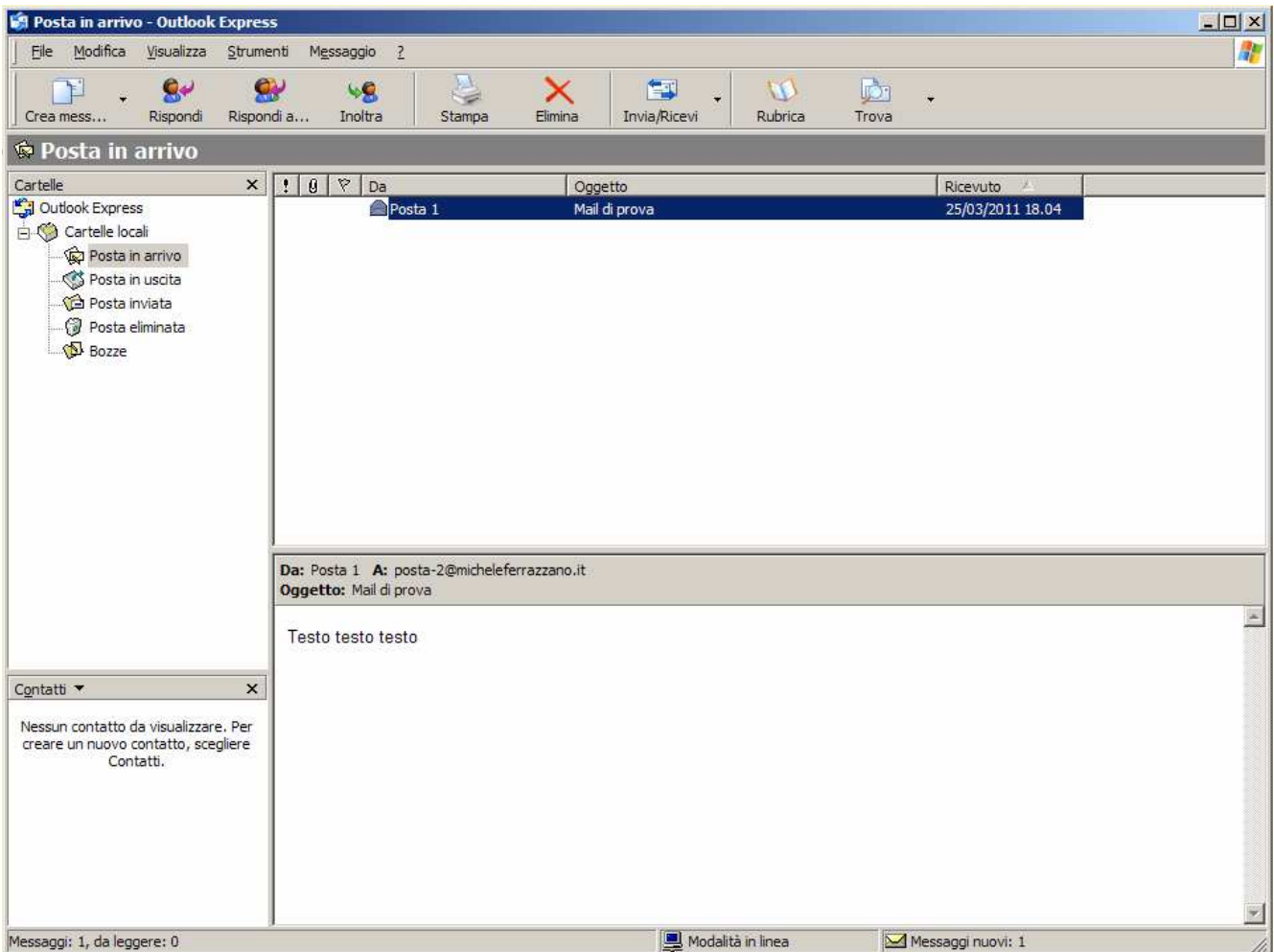
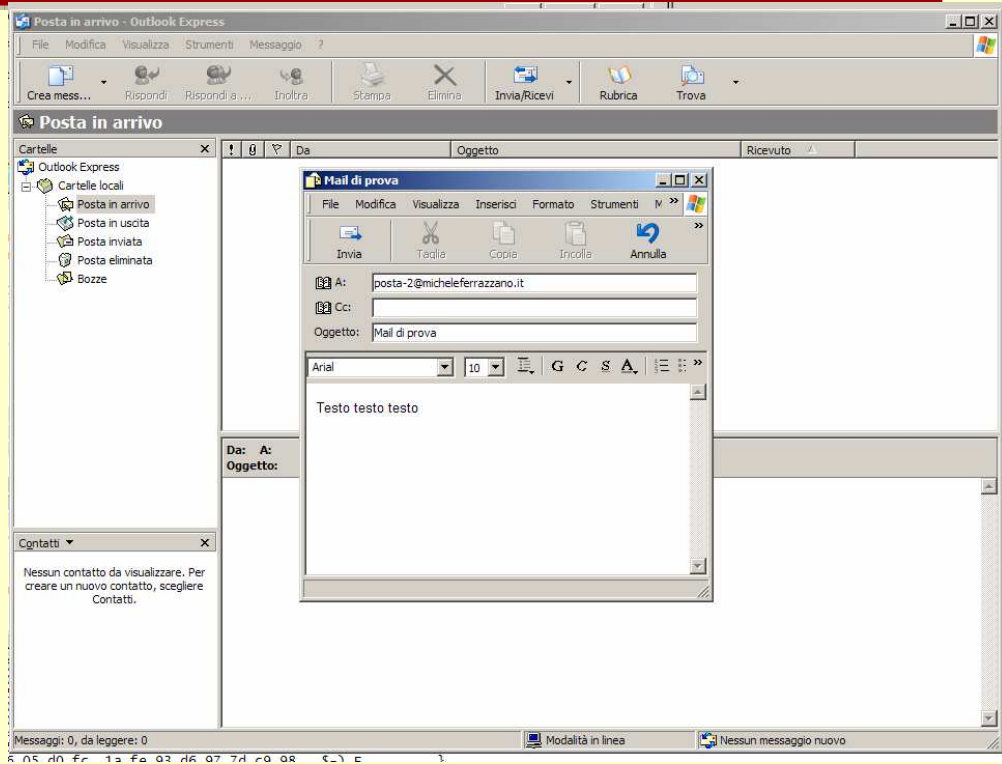
<!DOCTYPE PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<HTML><HEAD>
<META content=3D"text/html; charset=3Diso-8859-1" =
http-equiv=3DContent-Type>
<META name=3DGENERATOR content=3D"MSHTML 8.00.6001.19019">

```

Find Save As Print Entire conversation (1670 bytes) ASCII EBCDIC Hex Dump C Arrays Raw

Help

Effettivamente era accaduto questo...



traffico-invioposta.pcap - Wireshark

Filter: Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Info
22	3.638424	137.204.231.102	62.149.128.201	SMTP	C: DATA
23	3.652559	62.149.128.201	137.204.231.102	SMTP	S: 354 go ahead
24	3.652710	137.204.231.102	62.149.128.201	SMTP	C: DATA fragment, 1236 bytes
25	3.688256	62.149.128.201	137.204.231.102	TCP	smtp > hello [ACK] seq=198 Ack=1415 win=7416 Len=0
26	3.688296	137.204.231.102	62.149.128.201	IMF	from: "Posta 1" <posta-1@micheleferrazzano.it>, subject: Mail di prova, (text/plain)
27	3.690824	62.149.128.201	137.204.231.102	TCP	smtp > hello [ACK] seq=198 Ack=1420 win=7416 Len=0
28	3.719210	62.149.128.201	137.204.231.102	SMTP	S: 250 ok 1301072520 qp 13134
29	3.719325	137.204.231.102	62.149.128.201	SMTP	C: QUIT
30	3.730392	62.149.128.201	137.204.231.102	SMTP	S: 221 smtp6.aruba.it

[SEQ/ACK analysis]

Simple Mail Transfer Protocol

C: .

[DATA fragments (1236 bytes): #24(1236)]

Internet Message Format

Message-ID: <84C2DA3E8A8D48F4AD2F21AA77C1E2CD@personale.dir.unibo.it>

From: "Posta 1" <posta-1@micheleferrazzano.it>, 1 item

```

0000 4d 65 73 73 61 67 65 2d 49 44 3a 20 3c 38 34 43 Message-ID: <84C
0010 32 44 41 33 45 38 41 38 44 34 38 46 34 41 44 32 2DA3E8A8 D48F4AD2
0020 46 32 31 41 41 37 37 43 31 45 32 43 44 40 70 65 F21AA77C 1E2CD@pe
0030 72 73 6f 6e 61 6c 65 2e 64 69 72 2e 75 6e 69 62 rsonale.dir.unib
0040 6f 2e 69 74 3e 0d 0a 46 72 6f 6d 3a 20 22 50 6f o.it>..F rom: "Po
0050 73 74 61 20 31 22 20 3c 70 6f 73 74 61 2d 31 40 sta 1" < posta-1@
0060 6d 69 63 68 65 6c 65 66 65 72 72 61 7a 7a 61 6e michelef errazzan
0070 6f 2e 69 74 3e 0d 0a 54 6f 3a 20 3c 70 6f 73 74 o.it>..T o: <post
0080 61 2d 32 40 6d 69 63 68 65 6c 65 66 65 72 72 61 a-2@mich eleferra
0090 7a 7a 61 6e 6f 2e 69 74 3e 0d 0a 53 75 62 6a 65 zzano.it >..subje
00a0 63 74 3a 20 4d 61 69 6c 20 64 69 20 70 72 6f 76 ct: Mail di prov
00b0 61 0d 0a 44 61 74 65 3a 20 46 72 69 2c 20 32 35 a..Date: Fri, 25
00c0 20 4d 61 72 20 32 30 31 31 20 31 38 3a 30 31 3a Mar 201 1 18:01:
00d0 65 39 20 2b 30 31 30 30 0d 0a 4d 49 4d 45 2d 56 59 +0100 ..MIME-V
00e0 65 72 73 69 6f 6e 3a 20 31 2e 30 0d 0a 43 6f 6e ersion: 1.0..Con
00f0 74 65 6e 74 2d 54 79 70 65 3a 20 6d 75 6c 74 69 tent-Typ e: multi
0100 70 61 72 74 2f 61 6c 74 65 72 6e 61 74 69 76 65 part/alt ernative
0110 3b 0d 0a 09 62 6f 75 6e 64 61 72 79 3d 22 2d 2d ;...boun dary="--
0120 2d 2d 3d 5f 4e 65 78 74 50 61 72 74 5f 30 30 30 --_Next Part_000
0130 5f 30 30 30 43 5f 30 31 43 42 45 42 31 36 2e 42 _000C_01 CBEB16.B
0140 43 38 46 41 37 31 30 22 0d 0a 58 2d 50 72 69 6f C8FA710" ..X-Prio
0150 72 69 74 79 3a 20 33 0d 0a 58 2d 4d 53 4d 61 69 rity: 3. ..X-MSMai
0160 6c 2d 50 72 69 6f 72 69 74 79 3a 20 4e 6f 72 6d l-Priori ty: Norm
0170 61 6c 0d 0a 58 2d 4d 61 69 6c 65 72 3a 20 4d 69 al..X-Ma iler: M1
0180 63 73 6f 6e 74 70 4f 78 74 6f 6f 6f 6f 6f 6f
  
```

Frame (59 bytes): Reassembled DATA (1236 bytes)

Internet Message Format (imf), 1236 bytes Packets: 38 Displayed: 38 Marked: 0 Load time: 0:00.625 Profile: Default

IMF - The Wireshark Wiki - Mozilla Firefox

File Modifica Visualizza Cronologia Segnalibri Strumenti Aiuto

http://wiki.wireshark.org/IMF

IMF - The Wireshark Wiki

Accedi

WIRESHARK IMF

FrontPage RecentChanges FindPage HelpContents IMF

Pagina non alterabile Informazioni Allegati Altre azioni:

Internet Message Format (imf)

The Internet Message Format is format in which text messages are transferred over the Internet. Where SMTP is equivalent to the message envelope, IMF is equivalent to the letter within the envelope. It contains the originator, recipients, subject and dates. Whilst IMF only handles text messages, it can be augmented with [MIME_multipart](#) to support multi-media messages.

History

The Internet Message Format has been developed in parallel with the Simple Message Transfer Protocol SMTP. Indeed IMF messages are often actually referred to as "SMTP Messages". IMF was originally published [RFC 622](#) in 1982 as "Standards for the Format of ARPA Internet Text Messages", which in turn had been developed from earlier RFCs beginning with [RFC 561](#) "Standardizing Network Mail Headers".

In 2001, a new RFC was published, [RFC 2822](#), updating it to reflect current practice and incorporating incremental changes that were specified in other RFCs.

Additional IMF fields have been defined by other RFCs, including [RFC 2156](#) which defines a mapping between X.400 message fields and IMF heading fields.

The Multipurpose Internet Mail Extensions (MIME) series of RFCs further enhanced the specification of the format of the body of the message to support complex structures and binary attachments.

Protocol dependencies

- SMTP: Typically, IMF uses SMTP as its transport protocol

Example traffic

XXX - Add example decoded traffic for this protocol here (as plain text or Wireshark screenshot).

Wireshark

The IMF dissector is fully functional though there are some IMF heading fields that may be in common use that have not yet been specifically detected. They will appear as unknown extensions.

Preference Settings

Completato

Ricezione di posta elettronica

The image displays two screenshots of the Wireshark network protocol analyzer, showing the capture and analysis of a POP3 session for receiving email.

Top Screenshot: POP3 USER Command

No.	Time	Source	Destination	Protocol	Info
7	1.776305	AsustekC_74:a0:cc	Broadcast	ARP	who has 137.204.231.254? Tell 137.204.231.102
8	1.776894	All-HSRP-routers_c8	AsustekC_74:a0:cc	ARP	137.204.231.254 is at 00:00:0c:07:ac:c8
9	1.776903	137.204.231.102	62.149.128.161	TCP	cera-bcm > pop3 [SYN] Seq=0 win=64512 Len=0 MSS=1460 SACK_PERM=1
10	1.777634	62.149.128.161	137.204.231.102	TCP	pop3 > cera-bcm [SYN, ACK] Seq=0 Ack=1 win=5840 Len=0 MSS=1460 SACK_PERM=1
11	1.777652	137.204.231.102	62.149.128.161	TCP	cera-bcm > pop3 [ACK] Seq=1 Ack=1 win=64512 Len=0
12	1.800521	62.149.128.161	137.204.231.102	POP	S: +OK <6153.1301072688@popd11.ad.aruba.it>
13	1.800717	137.204.231.102	62.149.128.161	POP	C: USER posta-2@micheleferrazzano.it
14	1.801099	62.149.128.161	137.204.231.102	TCP	pop3 > cera-bcm [ACK] Seq=43 Ack=36 win=5840 Len=0
15	1.811907	62.149.128.161	137.204.231.102	POP	S: +OK

Packet 13 details: Post Office Protocol
 USER posta-2@micheleferrazzano.it\r\n
 Request command: USER
 Request parameter: posta-2@micheleferrazzano.it

Packet 13 hex dump:
 0000 00 00 0c 07 ac c8 00 23 54 74 a0 cc 08 00 45 00# Tt...E.
 0010 00 4b e8 91 40 00 80 06 e1 b1 89 cc e7 66 3e 95 ..K.@...>f>...
 0020 80 a1 07 02 00 6e df 91 e7 97 92 26 49 01 50 18h...&I.P.
 0030 fb d6 bf 55 00 00 85 93 45 32 20 70 6f 73 74 61 ...U..US ER posta
 0040 23 32 40 6d 69 68 68 65 6c 63 66 63 72 72 61 7a ...micheleferraz
 0050 7a 61 6e 6f 2e 69 74 0d 0a zano.it..

Bottom Screenshot: POP3 +OK Response

No.	Time	Source	Destination	Protocol	Info
12	1.800521	62.149.128.161	137.204.231.102	POP	S: +OK <6153.1301072688@popd11.ad.aruba.it>
13	1.800717	137.204.231.102	62.149.128.161	POP	C: USER posta-2@micheleferrazzano.it
14	1.801099	62.149.128.161	137.204.231.102	TCP	pop3 > cera-bcm [ACK] Seq=43 Ack=36 win=5840 Len=0
15	1.811907	62.149.128.161	137.204.231.102	POP	S: +OK
16	1.811969	137.204.231.102	62.149.128.161	POP	C: PASS password2
17	1.844191	62.149.128.161	137.204.231.102	TCP	pop3 > cera-bcm [ACK] Seq=49 Ack=52 win=5840 Len=0
18	1.866754	62.149.128.161	137.204.231.102	POP	S: +OK
19	1.867294	137.204.231.102	62.149.128.161	POP	C: STAT
20	1.867672	62.149.128.161	137.204.231.102	TCP	pop3 > cera-bcm [ACK] Seq=55 Ack=58 win=5840 Len=0

Packet 15 details: Post Office Protocol
 +OK \r\n
 Response indicator: +OK

Packet 15 hex dump:
 0000 00 23 54 74 a0 cc 00 00 0c 07 ac c8 08 00 45 00 ..#Tt...E.....
 0010 00 2e ec e3 40 00 40 06 1d 7d 3e 95 80 a1 89 cc ...@.@.]>....
 0020 e7 66 00 6e 07 02 92 26 49 01 df 91 e7 ba 50 18 ..f.n...&I....P.
 0030 16 d0 3b 2f 00 00 2b 4f 4b 20 0d 0a ;;/..+O K..

traffico-ricezioneposta.pcap - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Info
12	1.800521	62.149.128.161	137.204.231.102	POP	S: +OK <6153.1301072688@popd11.ad.aruba.it>
13	1.800717	137.204.231.102	62.149.128.161	POP	C: USER posta-2@micheleferrazzano.it
14	1.801099	62.149.128.161	137.204.231.102	TCP	pop3 > cera-bcm [ACK] Seq=43 Ack=36 win=5840 Len=0
15	1.811907	62.149.128.161	137.204.231.102	POP	S: +OK
16	1.811969	137.204.231.102	62.149.128.161	POP	C: PASS password2
17	1.844191	62.149.128.161	137.204.231.102	TCP	pop3 > cera-bcm [ACK] Seq=49 Ack=52 win=5840 Len=0
18	1.866754	62.149.128.161	137.204.231.102	POP	S: +OK
19	1.867294	137.204.231.102	62.149.128.161	POP	C: STAT
20	1.867672	62.149.128.161	137.204.231.102	TCP	pop3 > cera-bcm [ACK] Seq=55 Ack=58 win=5840 Len=0

Flags: 0x18 (PSH, ACK)
window size: 64464
Checksum: 0x5ff9 [validation disabled]
[SEQ/ACK analysis]

Post Office Protocol
PASS password2\r\n
Request command: PASS

```

0000 00 00 0c 07 ac c8 00 23 54 74 a0 cc 08 00 45 00 .....# Tt...E.
0010 00 38 e8 92 40 00 80 06 e1 c3 89 cc e7 66 3e 95 ..8.!.@. .{>....
0020 80 a1 07 02 00 6e df 91 e7 ba 92 26 49 07 50 18 ....h...& I..P.
0030 fb d0 5f f9 00 00 60 41 53 53 20 70 61 73 73 77 .....PA SS passw
0040 6f 72 64 32 0d 0a .....ord..

```

traffico-ricezioneposta.pcap - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Info
12	1.800521	62.149.128.161	137.204.231.102	POP	S: +OK <6153.1301072688@popd11.ad.aruba.it>
13	1.800717	137.204.231.102	62.149.128.161	POP	C: USER posta-2@micheleferrazzano.it
14	1.801099	62.149.128.161	137.204.231.102	TCP	pop3 > cera-bcm [ACK] Seq=43 Ack=36 win=5840 Len=0
15	1.811907	62.149.128.161	137.204.231.102	POP	S: +OK
16	1.811969	137.204.231.102	62.149.128.161	POP	C: PASS password2
17	1.844191	62.149.128.161	137.204.231.102	TCP	pop3 > cera-bcm [ACK] Seq=49 Ack=52 win=5840 Len=0
18	1.866754	62.149.128.161	137.204.231.102	POP	S: +OK
19	1.867294	137.204.231.102	62.149.128.161	POP	C: STAT
20	1.867672	62.149.128.161	137.204.231.102	TCP	pop3 > cera-bcm [ACK] Seq=55 Ack=58 win=5840 Len=0

Flags: 0x18 (PSH, ACK)
window size: 5840
checksum: 0x3b19 [validation disabled]
[SEQ/ACK analysis]

Post Office Protocol
+OK \r\n
Response indicator: +OK

```

0000 00 23 54 74 a0 cc 00 00 0c 07 ac c8 08 00 45 00 ...#Tt...E.
0010 00 2e ec e5 40 00 40 06 1d 7b 3e 95 80 a1 89 cc ...@.@. .{>....
0020 e7 66 00 6e 07 02 92 26 49 07 df 91 e7 ca 50 18 ...f.h...& I..P.
0030 16 d0 3b 19 00 00 26 4f 4b 20 0d 0a .....+OK...

```

traffico-ricezioneposta.pcap - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Info
23	1.890436	62.149.128.161	137.204.231.102	POP	S: +OK
24	2.069788	137.204.231.102	62.149.128.161	TCP	cera-bcm > pop3 [ACK] Seq=64 Ack=73 win=64440 Len=0
25	2.070212	62.149.128.161	137.204.231.102	IMF	
26	2.071172	137.204.231.102	62.149.128.161	POP	C: RETR 1
27	2.074078	3comEuro_0f:7b:fa	Spanning-tree-(for-br	STP	Conf. Root = 32768/0/00:1e:c1:0f:7b:c9 Cost = 0 Port = 0x8031
28	2.107621	62.149.128.161	137.204.231.102	TCP	pop3 > cera-bcm [ACK] Seq=84 Ack=72 win=5840 Len=0
29	2.108048	62.149.128.161	137.204.231.102	POP	S: +OK
30	2.108481	62.149.128.161	137.204.231.102	IMF	
31	2.108502	137.204.231.102	62.149.128.161	TCP	cera-bcm > pop3 [ACK] Seq=72 Ack=7374 win=64512 Len=0

window size: 5840
Checksum: 0x0875 [validation disabled]
[SEQ/ACK analysis]

Post Office Protocol
+OK \r\n
Response indicator: +OK
Return-Path: <posta-1@micheleferrazzano.it>\r\n

```

0030 16 d0 08 75 00 00 2b 4f 4b 20 0d 0a 52 65 74 75 ...U..+OK..Retu
0040 72 6e 2d 50 61 74 68 3a 20 3c 70 6f 73 74 61 2d ..rn-Path: <posta-
0050 31 40 6d 69 63 68 65 6c 65 66 65 72 62 61 7a 7a ..1@michel eferrazz
0060 61 6e 6f 2e 69 74 3e 0d 0a 44 65 6c 69 76 65 72 ..ano.it>.beliver
0070 65 64 2d 54 6f 3a 20 70 6f 73 74 61 2d 32 40 6d ..ed-To: posta-2@m
0080 69 63 68 65 6c 65 66 65 72 72 61 7a 7a 61 6e 6f ..michelefe rrazzano
0090 2e 69 74 0d 0a 52 65 63 65 69 76 65 64 3a 20 28 ..it..Rec eived: (
00a0 71 6d 61 69 6c 20 31 34 37 35 34 20 69 6e 76 6f ..gmail] 14 754 invo
00b0 6b 65 64 20 62 79 20 75 69 64 20 38 39 29 3b 20 ..ked by u id 89);
00c0 32 35 20 4d 61 72 20 32 30 31 31 20 31 37 3a 30 ..25 Mar 2 011 17:0
00d0 34 3a 30 38 20 2d 30 30 30 30 0d 0a 52 65 63 65 ..4:08 -00 ..Rece
00e0 69 76 65 64 3a 20 62 79 20 73 69 6d 73 63 61 6e ..ived: by s/mscan
00f0 20 31 2e 32 2e 30 20 70 69 64 3a 20 31 34 36 ..1.2.0 p id: 146
0100 36 30 2c 20 70 69 64 3a 20 31 34 37 30 30 2c 20 ..60, pid: 14700,
0110 74 3a 20 30 2e 32 30 33 39 73 0d 0a 20 20 20 20 ..t: 0.203 9s...
0120 20 20 20 20 20 73 63 61 6e 6e 65 72 73 3a 20 63 ..sca nners: c
0130 6c 61 6d 61 76 3a 20 30 2e 39 36 2e 35 2d 65 78 ..lamav: 0.96.5-ex
0140 70 2f 6d 3a 35 33 2f 64 3a 31 32 33 33 38 20 73 ..p/m:53/d :12338 2
0150 70 61 6d 3a 20 33 2e 33 2e 31 0d 0a 58 2d 53 70 ..pam: 3.3 .1..X-Sp
0160 61 6d 2d 43 68 65 63 6b 65 72 2d 56 65 72 73 69 ..am-Check er-versi
0170 6f 6e 3a 20 33 70 61 6d 41 73 73 61 73 73 69 6e ..on: Spam Assassin
0180 20 33 2e 33 2e 31 20 28 32 30 31 30 2d 30 33 2d ..3.3.1 ( 2010-03-
0190 31 36 29 20 6f 6e 20 6d 78 61 76 61 73 27 2e 61 ..16) on m xavas7.a
01a0 61 2e 61 72 75 6e 61 2e 69 74 0d 0a 58 2d 53 70 ..d.aruba. it..X-Sp
01b0 61 6d 2d 4c 65 76 65 6c 3a 20 0d 0a 58 2d 53 70 ..am-Level: .X-Sp
01c0 61 6d 2d 53 74 61 74 73 73 3a 20 4e 6f 2c 20 73 ..am-Statu s: No, s
01d0 62 6e 2d 68 2d 24 23 70 20 62 65 71 75 60 73 ..ene-Statu s: 2.00

```

Post Office Protocol (pop), 1460 bytes Packets: 43 Displayed: 43 Marked: 0 Load time: 0:00:00 Profile: Default

Follow TCP Stream

Stream Content

```

+OK <6153.1301072688@popd11.ad.aruba.it>
USER posta-2@micheleferrazzano.it
+OK
PASS password2
+OK
STAT
+OK 1 2223
LIST
+OK
1 2223
.
RETR 1
+OK |
Return-Path: <posta-1@micheleferrazzano.it>
Delivered-To: posta-2@micheleferrazzano.it
Received: (qmail 14754 invoked by uid 89); 25 Mar 2011 17:04:08 -0000
Received: by simscan 1.2.0 ppid: 14660, pid: 14700, t: 0.2039s
scanners: clamav: 0.96.5-exp/m:53/d:12338 spam: 3.3.1
X-spam-Checker-Version: SpamAssassin 3.3.1 (2010-03-16) on mxavas7.ad.aruba.it
X-spam-Level:
X-spam-Status: No, score=-2.0 required=5.0 tests=BAYES_00,HTML_MESSAGE
.autolearn=disabled version=3.3.1
Received: from unknown (HELO smtp1q01.aruba.it) (62.149.158.32)
by mxavas7.ad.aruba.it with SMTP; 25 Mar 2011 17:04:07 -0000
Received: (qmail 18252 invoked by uid 89); 25 Mar 2011 17:01:59 -0000
Received: from unknown (HELO smtp6.aruba.it) (62.149.158.226)
by smtp1q01.aruba.it with SMTP; 25 Mar 2011 17:01:59 -0000
Received: (qmail 13134 invoked by uid 89); 25 Mar 2011 17:02:00 -0000
Received: from unknown (HELO cirsfidkidman) (posta-1@micheleferrazzano.it@137.204.231.102)
by smtp6.ad.aruba.it with SMTP; 25 Mar 2011 17:02:00 -0000
Message-ID: <84C2DA3E8A8D48F4AD2F21AA77C1E2CD@personale.dir.unibo.it>
From: "Posta 1" <posta-1@micheleferrazzano.it>
To: <posta-2@micheleferrazzano.it>
Subject: Mail di prova
Date: Fri, 25 Mar 2011 18:01:59 +0100
MIME-Version: 1.0
Content-Type: multipart/alternative;
.boundary="-----_NextPart_000_000C_01CBEB16.BC8FA710"
X-Priority: 3
X-MSMail-Priority: Normal
X-Mailer: Microsoft Outlook Express 6.00.2900.5931
X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2900.5994

This is a multi-part message in MIME format.

-----_NextPart_000_000C_01CBEB16.BC8FA710
Content-Type: text/plain;
.charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable

```

Find Save As Print Entire conversation (2470 bytes) ASCII EBCDIC Hex Dump C Arrays Raw

Help

traffico-ricezioneposta.pcap - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Info
30	2.108481	62.149.128.161	137.204.231.102	IMF	
31	2.108502	137.204.231.102	62.149.128.161	TCP	cera-bcm > pop3 [ACK] Seq=72 Ack=2374 win=64512 Len=0
32	2.109308	137.204.231.102	62.149.128.161	POP	C: DELE 1
33	2.110205	62.149.128.161	137.204.231.102	TCP	pop3 > cera-bcm [ACK] Seq=2374 Ack=80 win=5840 Len=0
34	2.120953	62.149.128.161	137.204.231.102	POP	S: +OK
35	2.121239	137.204.231.102	62.149.128.161	POP	C: QUIT
36	2.143751	62.149.128.161	137.204.231.102	POP	S: +OK
37	2.143764	62.149.128.161	137.204.231.102	TCP	pop3 > cera-bcm [FIN, ACK] Seq=2386 Ack=86 win=5840 Len=0
38	2.143778	137.204.231.102	62.149.128.161	TCP	cera-bcm > pop3 [ACK] Seq=86 Ack=2387 win=64500 Len=0

window size: 64512

- Checksum: 0x1271 [validation disabled]
- [SEQ/ACK analysis]
- Post Office Protocol
- DELE 1\r\n
 - Request command: DELE
 - Request parameter: 1

```

0000 00 00 0c 07 ac c8 00 23 54 74 a0 cc 08 00 45 00  ....# Tt...E.
0010 00 30 e8 98 40 00 80 06 e1 c5 89 cc e7 66 3e 95  .0..@...f>..
0020 80 a1 07 02 00 6e df 91 e7 de 92 26 52 1c 50 18  ....n...&R.P.
0030 fc 00 12 71 00 00 84 45 4c 45 20 31 0d 0a  ...q..DELE 1..

```

Request (pop.request), 8 bytes Packets: 43 Displayed: 31 Marked: 0 Load time: 0:00.000 Profile: Default