# FastResponder: New Open Source weapon to detect and understand a large scale compromise

# “About us”

*French Company in  Cyber Security*

*Cert Sekoia*

*Detection Intrusion experts*

*Digital Forensics and Incidence Response*

*Co-Organizer of #BotConf*

*Members of Honeynet Project*

# “Symantec Executive Says Antivirus is Dead”


Wall Street Journal 2014, May 4th - Brian Dye, senior vice-president Symantec

# Our 3 objectives

**Fast Data Acquisition for Detection of compromissions**

**Fast Analysis of an attack**

**Fast Incident Response to mitigate the impact**

# Common denominator after an attack ?

# Common denominator of traditionnal forensic?

Slow

Painful

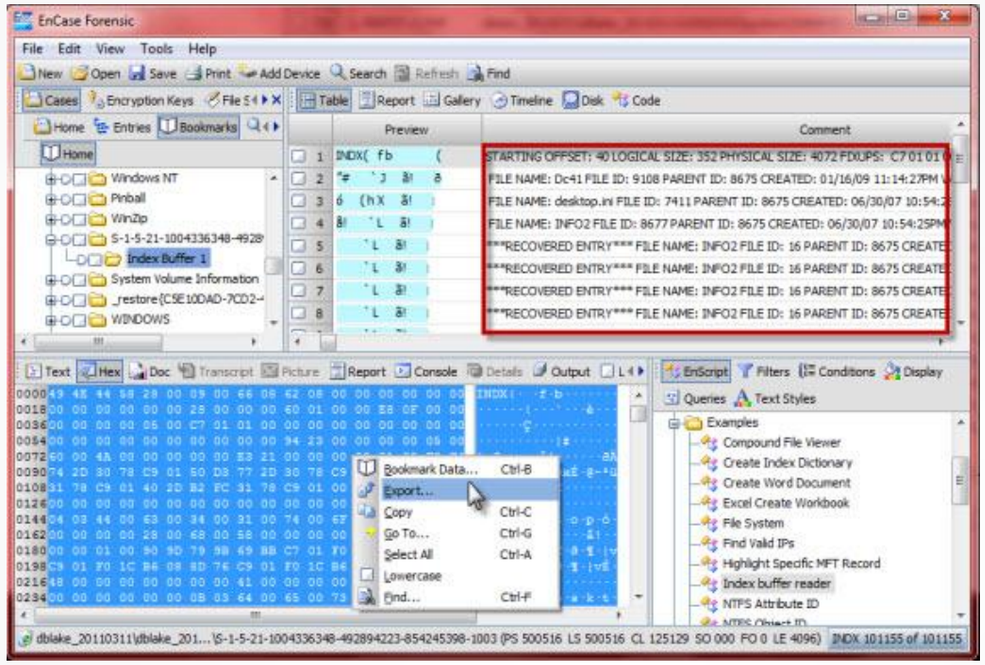
Expensive

Business

independent

# Old fashioned holistic approach tools

Hardware for data acquisition




Software for data acquisition

| 1 | date | time | MACB | source | Description |
|---|---|---|---|---|---|
| 2948 | 2/1/2012 | 3:00:02 | .ACB | WEBHIST | URL:http://www.staples.com/sbd/img/bg/bg_flyoutcloser.gif cache stored in: 3ASVQIE8/bg_flyoutcloser[1].gif - HTTP/1.1 200 OK - - ETag: "a3db0-19f-49b2c2 |
| 2949 | 2/1/2012 | 3:00:02 | .ACB | WEBHIST | URL:http://www.staples.com/sbd/img/bg/bg_car-arrows.gif cache stored in: 3ASVQIE8/bg_car-arrows[1].gif - HTTP/1.1 200 OK - - ETag: "48cf3-956-49b2c27d5 |
| 2950 | 2/1/2012 | 3:00:02 | .ACB | WEBHIST | URL:http://www.staples.com/sbd/reviews/engine/images/stars_small.gif cache stored in: PY8WR6ZU/stars_small[1].gif - HTTP/1.1 200 OK - - ETag: "b5cbc-9 |
| 3221 | 2/1/2012 | 3:00:19 | .ACB | WEBHIST | URL:http://www.staples.com/sbd/img/bg/bg_d01_hover.gif cache stored in: 3ASVQIE8/bg_d01_hover[1].gif - HTTP/1.1 200 OK - - ETag: "48cfa-147-49b2c27d5 |
| 3284 | 2/1/2012 | 3:07:24 | MACB | WEBHIST | URL:http://www.staples.com/office/supplies/StaplesSearch?catalogId=10051&langId=-1&storeId=10001&searchComparisonSkus=&sortByValue=price\|0&se |
| 3285 | 2/1/2012 | 3:07:25 | MACB | WEBHIST | URL:http://www.staples.com/office/supplies/StaplesSearch?searchkey=envelope&currentUrl=http%3A%2F%2Fwww.staples.com%2Flnk-Toner-Finder%2Fc |
| 3286 | 2/1/2012 | 3:08:00 | MACB | OXML | - Application: Microsoft Office Word - Company: Microsoft - AppVersion: 12.0000 - Invoice-#233-Staples-Office-Supplies.docx |
| 3299 | 2/1/2012 | 3:08:40 | ..CB | LNK | C:/Drivers/video/Invoice-#233-Staples-Office-Supplies.docx <-C:/vsc12/Users/harrell/AppData/Roaming/Microsoft/Office/Recent/Invoice-#233-Staples-Offi |
| 3300 | 2/1/2012 | 3:08:40 | M... | LNK | C:/Drivers/video <-C:/vsc12/Users/harrell/AppData/Roaming/Microsoft/Windows/Recent/video.lnk- which is stored on a local vol type - Fixed- SN 0x4ce707 |
| 3301 | 2/1/2012 | 3:08:40 | .A.. | LNK | C:/Drivers/video <-C:/vsc12/Users/harrell/AppData/Roaming/Microsoft/Windows/Recent/video.lnk- which is stored on a local vol type - Fixed- SN 0x4ce707 |
| 3302 | 2/1/2012 | 3:08:40 | ...B | MACTIME | C:/Drivers/video/Invoice-#233-Staples-Office-Supplies.docx |
| 3303 | 2/1/2012 | 3:08:41 | .A.. | Jump Lists | C:\Drivers\video\Invoice-#233-Staples-Office-Supplies.docx |
| 3304 | 2/1/2012 | 3:08:41 | MACB | WEBHIST | URL:file:///C:/Drivers/video/Invoice- |
| 3305 | 2/1/2012 | 3:08:41 | M... | LNK | C:/Drivers/video/Invoice-#233-Staples-Office-Supplies.docx <-C:/vsc12/Users/harrell/AppData/Roaming/Microsoft/Office/Recent/Invoice-#233-Staples-Offi |
| 3306 | 2/1/2012 | 3:08:41 | .A.. | LNK | C:/Drivers/video/Invoice-#233-Staples-Office-Supplies.docx <-C:/vsc12/Users/harrell/AppData/Roaming/Microsoft/Office/Recent/Invoice-#233-Staples-Offi |
| 3309 | 2/1/2012 | 3:08:41 | MAC. | MACTIME | C:/Drivers/video/Invoice-#233-Staples-Office-Supplies.docx |
| 3310 | 2/1/2012 | 3:08:41 | ..C. | MACTIME | C:/Users/harrell/AppData/Local/Microsoft/Windows/History/History.IE5/MSHist012012013120120201 |
| 3311 | 2/1/2012 | 3:08:41 | ..C. | MACTIME | C:/Users/harrell/AppData/Local/Microsoft/Windows/History/History.IE5/MSHist012012013120120201/index.dat |
| 3312 | 2/1/2012 | 3:08:41 | MAC. | MACTIME | C:/Users/harrell/AppData/Roaming/Microsoft/Office/Recent |
| 3313 | 2/1/2012 | 3:08:41 | M.C. | MACTIME | C:/Users/harrell/AppData/Roaming/Microsoft/Office/Recent/index.dat |
| 3314 | 2/1/2012 | 3:08:41 | MACB | MACTIME | C:/Users/harrell/AppData/Roaming/Microsoft/Office/Recent/Invoice-#233-Staples-Office-Supplies.docx.LNK |
| 3315 | 2/1/2012 | 3:08:41 | MACB | MACTIME | C:/Users/harrell/AppData/Roaming/Microsoft/Office/Recent/video.LNK |
| 3316 | 2/1/2012 | 3:08:41 | MAC. | MACTIME | C:/Users/harrell/AppData/Roaming/Microsoft/Windows/Recent |
| 3317 | 2/1/2012 | 3:08:41 | M.C. | MACTIME | C:/Users/harrell/AppData/Roaming/Microsoft/Windows/Recent/AutomaticDestinations/1b4dd67f29cb1962.automaticDestinations-ms |
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| 3319 | 2/1/2012 | 3:08:41 | MACB | MACTIME | C:/Users/harrell/AppData/Roaming/Microsoft/Windows/Recent/Invoice-#233-Staples-Office-Supplies.docx.lnk |
| 3320 | 2/1/2012 | 3:08:41 | MACB | MACTIME | C:/Users/harrell/AppData/Roaming/Microsoft/Windows/Recent/video.lnk |
| 3321 | 2/1/2012 | 3:08:41 | MAC. | MACTIME | C:/Users/harrell/AppData/Roaming/Microsoft/Word |

Spreadshit macrro for data analysis

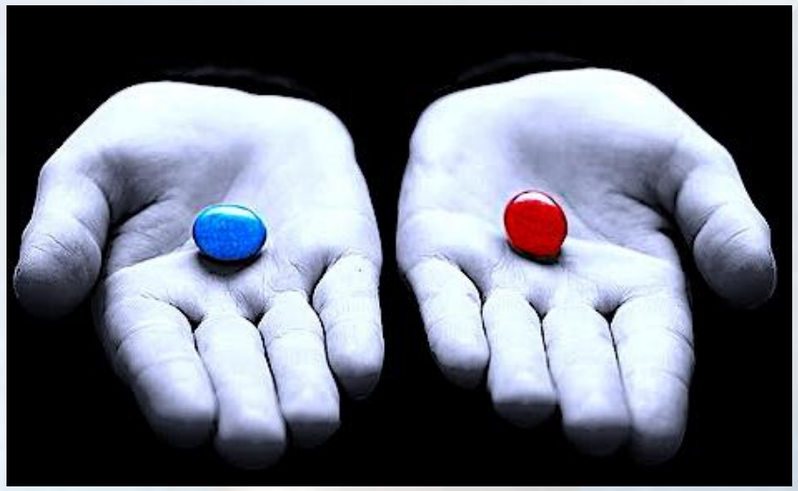
# What is #FastForensic ?

**Easy to use**

**Focused**

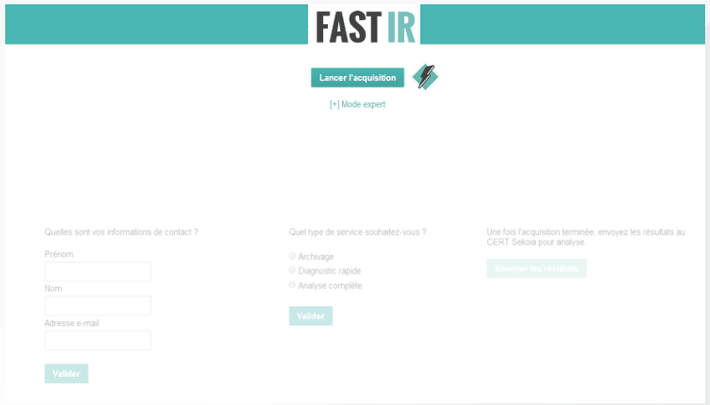
**Fast**

**Context aware**

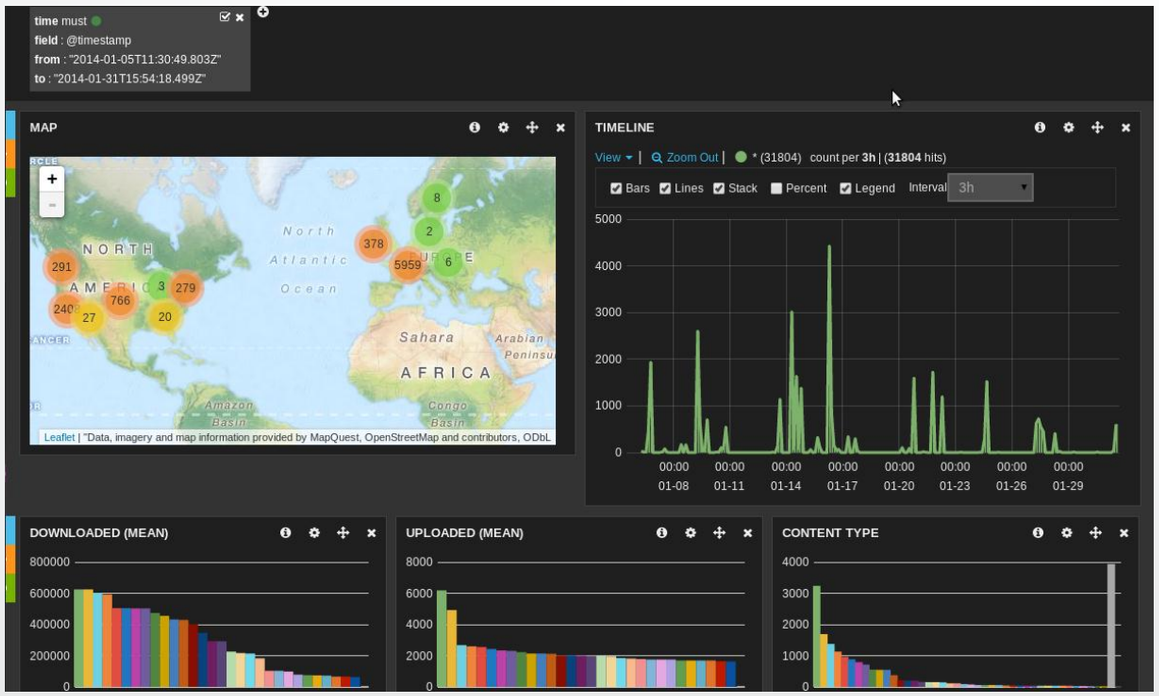



# #FastForensic :  a all new approach

Specialized hardware
for data acquisition




1 click software for data
acquisition

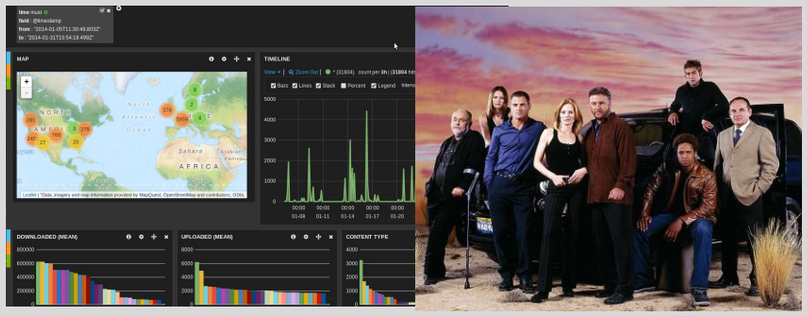



« Big data »  technologies for
data analysis

# Process

## Detection

Datas





Alerts

Interested parties

## Assessment

## Intelligence

# Process | A Lean Cybersecurity approach

Datas

**Detection**

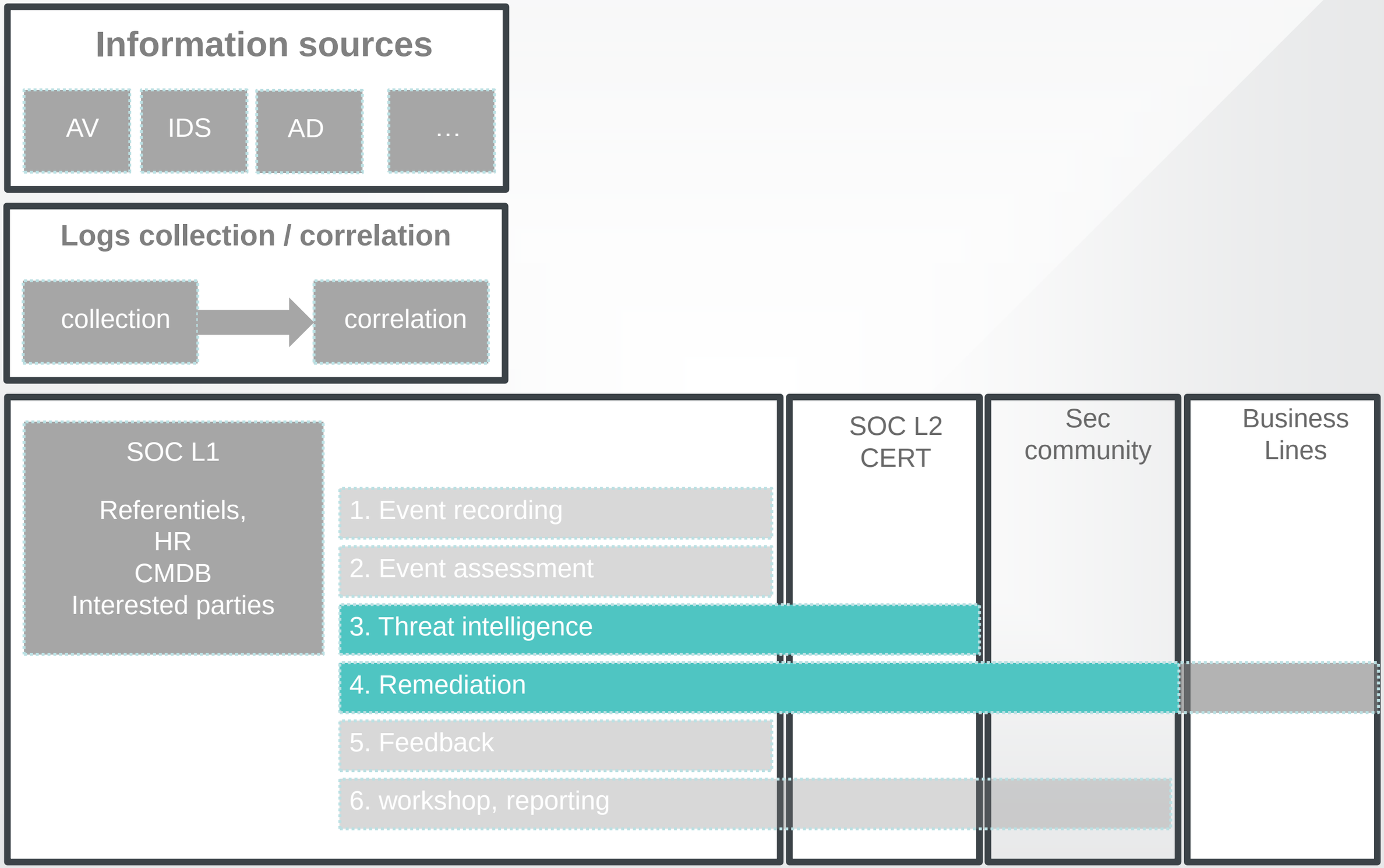
Alerts

Interested partie

**Assessment**

**Intelligence**

# Large company integrated model



# Large company integrated model

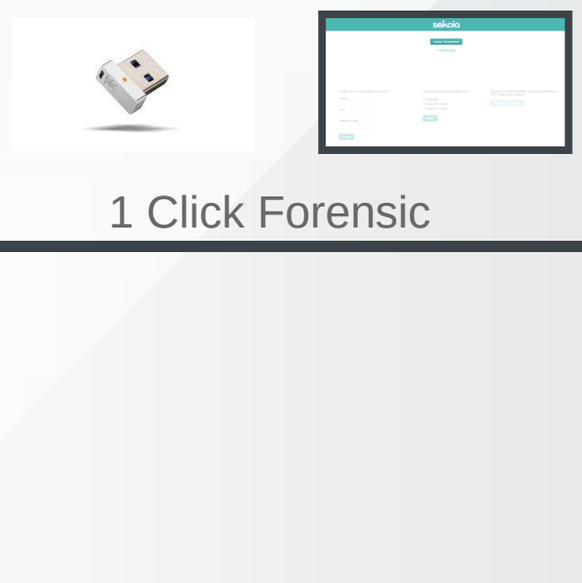
## Information sources

AV | IDS | AD | …

## Logs collections / correlation

collection → correlation

…

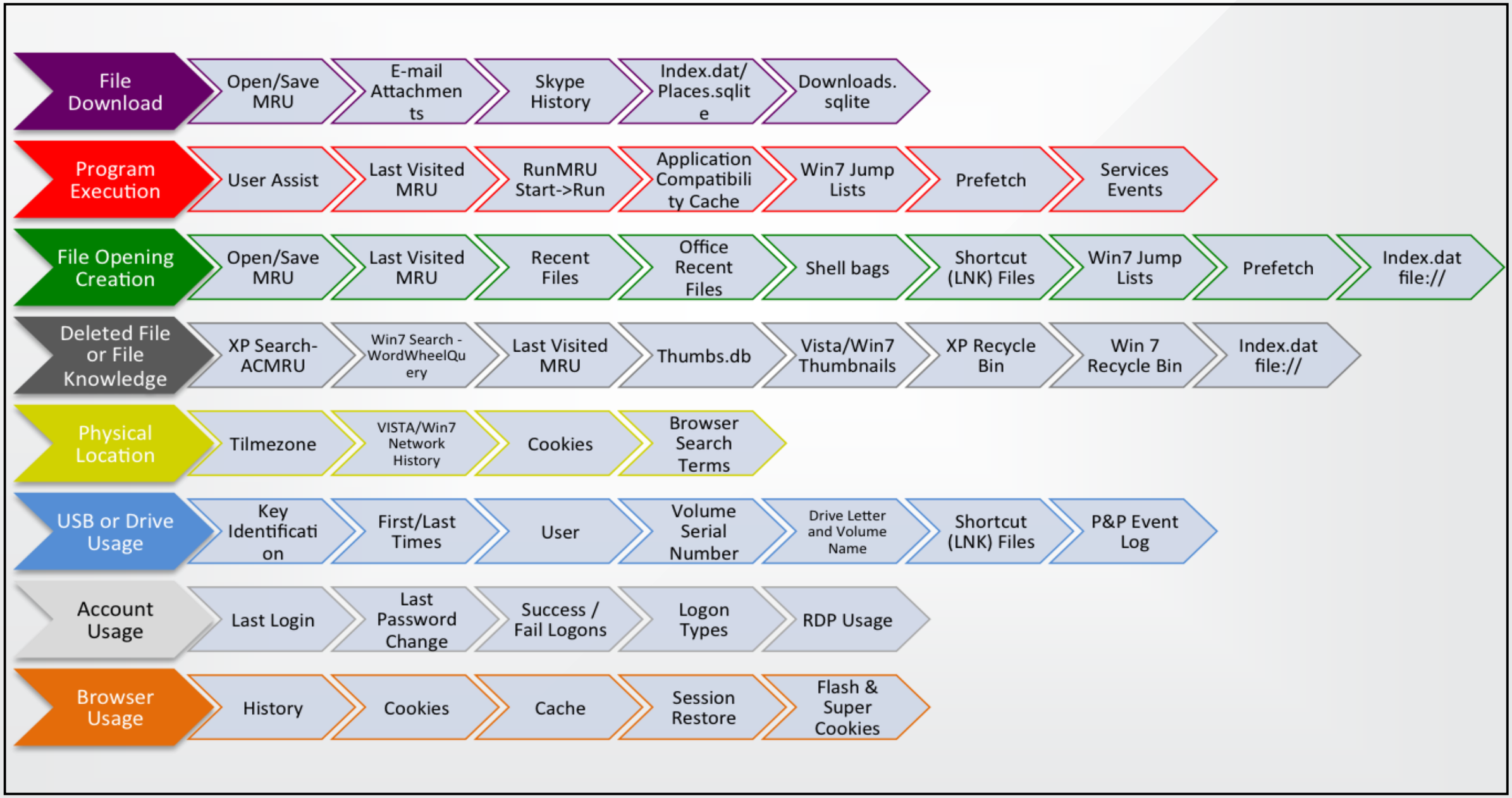



| SOC L1 | | SOC L2 CERT | Security community | Business Lines |
|---|---|---|---|---|
| Referentiels, HR, CMDB, Interested Parties | 1. Event recording | | | |
| | 2. Event assessment | | | |
| | 3. Threat intelligence | | | |
| Malware Intll  | 4. Remediation | | | |
| | 5. feedback | | | |
| | 6. workshop, reporting | | | |

# So we have develop FastResponder

# Focus on FastResponder

Need for a fast artefact acquisition tool, easy to use and robust




*Source : SANS Windows Forensic FOR 408*

# Focus on FastResponder

- ***Decoding MBR and BootSector***
- ***Dump MFT***
- ***MD5 files of drive system***
- ***Detect malicious files with yara signatures***

# FastResponder: Enter the code

***Python 2.7 + ctypes***

***PyWin32***

***WMI requests***

***Psutils***

***Events logs new chanels***

***Export CSV***

***CLI or Config File***

***Detect encoding of Operating System***

# FastResponder: On IR

- ***Very simple to distribute and collect the results***
- ***Very simple to use***
- ***The program doesn’t crash of an decoding artefact***
- ***Easy to add a artefact source***
- ***Fast Collector***

# FastResponder: On IR

- ***Profile collector like volatility***
- ***Choose an artefact to collect to minimize and concentrate searching***
- ***One module, one source of artefacts***
- ***With CSV, you can index in ELK or Splunk results***
- ***You can deploy by script or GPO the .exe***
- ***MD5 of all files to compare with your threat intel data base***
- ***You can use your threat intel signatures with yara integration***

# FastResponder: Demo time

# FastResponder: Future Features

*Ram Dump and analyses*

*DNS Cache*

*Embeded Certificates in PE*

*Multi Browser history*

*Windows 8.1/10*

*Console collect like Viper or Meterpreter*

# For the community

# Thanks to CERT team

sekoia
#CYBERSECURITY

**Sébastien Larinier**
Sebastien.larinier@sekoia.fr
**@sebdraven**

SEKOIA
16, Place de la Madeleine
75008 Paris

www.sekoia.fr