

News from the front



Romain Wartel, CERN

July 2015 GDB



Linux = Windows

- Follow-up on the 2015 WLCG Collaboration Workshop :
<https://indico.cern.ch/event/345619/session/0/contribution/0/material/slides/0.pdf>
- The landscape has changed:
 - Data center security = laptop security
 - Linux = Windows
- Most large attacks now target both platforms
 - Attackers needs both data and computing services
 - Relying solely on “multi layers” security is bound to fail
- Data center compromises occur via **admin credentials theft**
- Web, mail and mobile platforms are a primary battlefields
 - And a firewall will not help



Conferences

XXVII International Symposium on Lepton Photon Interactions at High Energies
17-22 August 2015 Ljubljana Exhibition and Convention Centre

Lepton Photon 2015

Early registration deadline is June 22th.

The International Symposium on Lepton Photon Interactions at High Energies is a biennial conference series sponsored by the International Union on Pure and Applied Physics. The



Conferences

XXVII International Sympos X

lp2015.ijs.si

- Future Facilities

To foster attendance of the younger generation scientists, this occurrence shall pay special attention to the poster presentations. They shall be on display during all the breaks of the entire conference, the presence of a pre-announced presenters required at two of the breaks. In addition, six posters selected by the International Advisory Committee will be offered a plenary presentation in the regular conference schedule. All the posters will be published in the Proceedings of the Conference together with the plenary reviews.

 **IJS**  *Univerza v Ljubljani*

 **IUPAP**  **CERN**  **DESY**  **Fermilab**

 @LeptonPhoton15



Conferences

"Dear LP2015 conference organizers,

I am a registered speaker to the conference on behalf of the CMS collaboration.

I just received a phone call from a representative of the conference inviting me to book an hotel directly from a web page on ehsroom.com (link given below) instead of the recommended reservation from the conference web page. [...]"

The screenshot shows a web browser window with the URL www.ehsrooms.com. The page features a navigation menu with links for HOME, ABOUT, TERMS & CONDITIONS, and CONTACT. A logo for EHS is displayed, featuring a stylized city skyline and an airplane. Below the logo is a registration form with the following fields:

Country	Contact
<input type="text"/>	<input type="text"/>
City	Company
<input type="text"/>	<input type="text"/>
Check In	Phone
<input type="text"/>	<input type="text"/>

The form also includes a "Check Out" field with a calendar icon and a "Phone" field with a telephone icon.



Conferences

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CudaSign formerly SignNow | Your progress: 0 of 23 | History | Help | [Guide Me](#)



Expo Housing Services

Credit Card Final Balance Authorization for
Payment of Room Accommodation Services

41 Tavistock Crescent Flat # 3 London, W11 1AD	Phone: +44 20 3239 3976 Fax: +44 20 3727 0793 ops@ehsrooms.com	www.expohousingservices.com Business ID # 464-021-673/000
---	--	---

We are delighted that you have selected (EHS) to provide your pre-paid room accommodation reservations. Please fill out this form completely and EHS will process all relevant room reservations agreed upon and the relevant charges for those rooms. This form acknowledges that all agreed upon room charges, EHS services, costs, fees, and taxes will be charged to the listed credit card below.

Please fax this signed and completed form to +44 20 3727 0793 or E-mail it to ops@ehsrooms.com

Hotel Name:
Avg. Price per Night:

Cardholder Information:
Total Rooms
Total Nights

Name as it appears on Credit Card:
Authorized Contact:

Card Type:
 VISA
 MasterCard
 American Express
 Maestro

Account Type:
 Personal
 Corporate – Company Name:

Card Number:
Expiration Date:
CCV:

Address (Billing Address on Credit Card):





Conferences

ICNFP2014: 2nd Internatio

icp2014.srpioneers.org/en/page.php?rid=9

Home | Join Conference |

2nd International Conference on New Frontiers in Physics (ICNFP 2014)

Istanbul, Turkey, July 10-11, 2014

Home > About conference

.. About conference

Reviewer Control Panel

Author Control Panel

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- Instructions for Papers
- Important Dates

The International Conference on new Frontiers in Physics (ICNFP 2014) aims to promote scientific exchange and development of novel ideas in science with a particular accent on interdisciplinarity.

The conference will bring together worldwide experts and promising young scientists working on experimental and theoretical aspects of particle, nuclear and astro-particle physics and cosmology, with colleagues from other disciplines, for example solid state physics, mathematics, mathematical physics, quantum physics, quantum entanglement and other.



Conferences

The screenshot shows a web browser window with the URL `indico.cern.ch/event/277650/`. The page features a green header with a classical painting of a bull and a figure. The main content area includes a navigation menu on the left and a main text block on the right. The navigation menu lists various conference-related items, and the main text provides details about the conference dates, FAIR workshop, and main conference sessions. A search bar is located in the top right of the header area.

3rd International Conference on New Frontiers in Physics

from 28 July 2014 to 6 August 2014
Europe/Athens timezone

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FAIR Workshop
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60th CERN anniversary session
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Conference Excursion
Conference Dinner

3rd International Conference on New Frontiers in Physics

from 28 to 29 July FAIR Workshop
from 29 to 30 July Lectures
from 31 July to 6 August Main Conference

The International Conference on new Frontiers in Physics aims to promote scientific exchange and development of novel ideas in science with a particular accent on interdisciplinarity.

The conference will bring together worldwide experts and promising young scientists working on experimental and theoretical aspects of particle, nuclear, heavy ion and astro-particle physics and cosmology, with colleagues from other disciplines, for example solid state physics, mathematics, mathematical physics, quantum optics, quantum entanglement and other.

The conference will also host a workshop on **"Opportunities from FAIR to other low energy facilities"**.



2nd International Conference on New Frontiers in Physics (ICNFP 2014)

Istanbul, Turkey, July 10-11, 2014



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Author Control Panel

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- Registration Fees

Home > Editorial board

.. Editorial board

Editorial Board:

1. Dr. D. Yonetoku, kanazawa Uni., (Japan)
2. Dr. C. Aktas, Istanbul Uni., (Turkey)
3. Dr. T. Altanhan, Ankara Uni., (Turkey)
4. Dr. R. Faez, Sharif Uni., (Iran)
5. Dr. S. Haji-Nasiri, TM Uni., (Iran)
6. Dr. H. Zandi, Sharif Uni., (Iran)
7. Dr. Y. Deng, University of Michigan, (USA)
8. Dr. J. Koda, University of Tokyo, (Japan)
9. Dr. J. Smith, University of Hannover, (Germany)
10. Dr. L. Piper, University of Warwick, (UK)
11. Dr. C. Allen, Angelo state Uni., (USA)
12. Dr. D. Wang, Peking Uni., (China)
13. Dr. S. Mohanty, Indian Institute of Science, (India)
14. Dr. J. Ngai, University of Toronto, (Canada)
15. Dr. Yi, WANG, The Chinese University of Hong Kong, (Hong Kong)



Conferences

ICN2015: 3rd International x

icn2015.srpioneers.org/en/

Home | Secretariat Email Address | Frequently Asked Questions (FAQs) | Important Dates |

3rd International Conference on Nanotechnology (ICN2015)

Istanbul, Turkey, August 27-28, 2015

Reviewer Control Panel

User Control Panel
paper submission, subscription, ...

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- Frequently Asked Questions (FAQs)
- Credibility and Indexing
- Workshop
- Photo Gallery

Organizer



Supporters and sponsorship



The Last Extension (New Paper Submission Only in July 4 Just for One Day)

News

The Last  The Last Extension (New Paper Submission Only in July 4 Just for One Day)



Conferences

W ICN Amsterdam 2015: 17th x

https://www.waset.org/conference/2015/08/amsterdam/ICN

E-mail Password Forget? Log In Sign Up

WASET
WORLD ACADEMY OF SCIENCE, ENGINEERING AND TECHNOLOGY
Excellence in Research and Innovation for Humanity

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ICN 2015 : 17th International Conference on Nanotechnology

Amsterdam, The Netherlands
August 6 - 7, 2015

Conference Code: 15NL08ICN

Conference Information	Conference Objectives
Conference Objectives	The ICN 2015: 17th International Conference on Nanotechnology aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results about all aspects of Nanotechnology. It also provides the premier interdisciplinary forum for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns, practical challenges encountered and the solutions adopted in the field of Nanotechnology.
Important Dates	
Call for Papers	Call for Contributions
Conference Committee	All honourable authors are kindly encouraged to contribute to and help shape the conference through submissions of their research abstracts, papers and e-posters. Also, high quality research contributions describing original and unpublished results of conceptual, constructive, empirical, experimental, or theoretical work in all areas of Nanotechnology are cordially





Targeted phishing

RD89 Collaboration Meeting June 29/30 2015, Jones Institute, 1st announcement — CERN SEC

This message contains remote content. [Load Remote Content](#)

Emilie D Bogart <Emilie.Bogart@jiscs.com> Today 16:10
To: cert@cern.ch
RD89 Collaboration Meeting June 29/30 2015, Jones Institute, 1st announcement

Dear Collaborator:

On the last meeting in Amsterdam we decided to have the next RD89 Collaboration meeting at Jones Institute. The date is now fixed (as we proposed in Amsterdam)

time:
Monday, June, 29. and Tuesday, June, 30. in 2015

location:
CERN, 1211 Geneva 23, Switzerland

For the Collaboration meeting you find the following information:

accomodation:
Do a reservation at the CERN hostel and send mail to Emilie.Bogart@jiscs.com or look into our web-page to find a list of other hostels in Geneva or France.

further information:
<http://RD89.JISCS.COM/RD89/RDCERN67731TC.PDF>

Please inform us, wheather you attend the meeting, and if you like to report a topic or want to have it discussed.

In case you are missing a colleague on this mailing list, please forward it and let us know about the missing address, to be included in the list in future.

.....

Emilie D Bogart
Emilie.Bogart@jiscs.com

Jones Institute



Targeted phishing

Result	Protocol	Host	URL	Body	Caching	Content
200	HTTP	rd85.jiscs.com	/RD85/TW9yZS0gPXg9Zmxhc2gsbnVsbAk=.jpg	0	no-stor...	image/jpc
404	HTTP	rd85.jiscs.com	/favicon.ico	700		text/htr
302	HTTP	rd85.jiscs.com	/RD85/i/RDCERN61510QO.PDF	144	no-stor...	text/htr
302	HTTP	www.jiscs.com	/	154	private	text/htr
200	HTTP	www.jiscs.com	/Artide.aspx?a=0	93,123	private	text/htr
304	HTTP	www.jiscs.com	/site.css	0		
200	HTTP	rd78.jiscs.com	/RD78/RDCERN45252GL.PDF	192		text/htr
200	HTTP	rd78.jiscs.com	/RD78/200.js	14,272	no-stor...	text/htr
200	HTTP	rd78.jiscs.com	/RD78/TW9yZS0gPXg9Zmxhc2gsbnVsbAk=.jpg	0	no-stor...	image/jpc
404	HTTP	rd78.jiscs.com	/favicon.ico	700		text/htr
302	HTTP	rd78.jiscs.com	/RD78/i/RDCERN45252GL.PDF	144	no-stor...	text/htr
302	HTTP	www.jiscs.com	/	154	private	text/htr
200	HTTP	www.jiscs.com	/Artide.aspx?a=0	93,123	private	text/htr
200	HTTP	www.jiscs.com	/site.css	3,940		text/css

- Attacker fully controls “jiscs.com” DNS
- PDF is not a PDF (surprise!)
- Redirects to 200.js
- Cascading payloads



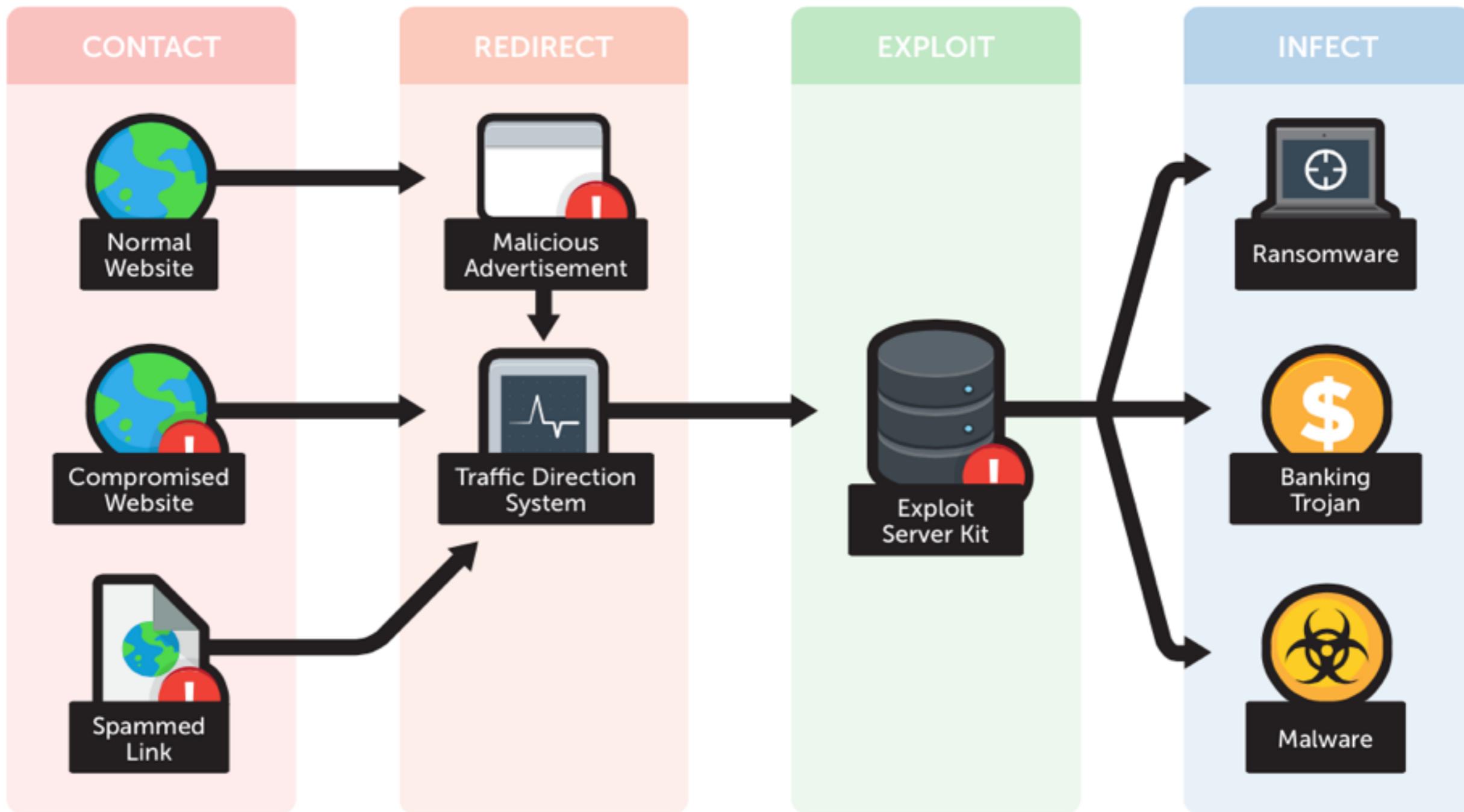
Targeted phishing

- JS triggers Flash payload, calling yet another payload

Result	Protocol	Host	URL	Body	Caching	Content
200	HTTP	rd85.jiscs.com	/RD85/TW9yZS0gPXg9Zmxhc2gsbnVsbAk=.jpg	0	no-stor...	image/jpc
404	HTTP	rd85.jiscs.com	/favicon.ico	700		text/htr
302	HTTP	rd85.jiscs.com	/RD85/i/RDCERN61510QO.PDF	144	no-stor...	text/htr
302	HTTP	www.jiscs.com	/	154	private	text/htr
200	HTTP	www.jiscs.com	/Article.aspx?a=0	93,123	private	text/htr
304	HTTP	www.jiscs.com	/site.css	0		
200	HTTP	rd78.jiscs.com	/RD78/RDCERN45252GL.PDF	192		text/htr
200	HTTP	rd78.jiscs.com	/RD78/200.js	14,272	no-stor...	text/htr
200	HTTP	rd78.jiscs.com	/RD78/TW9yZS0gPXg9Zmxhc2gsbnVsbAk=.jpg	0	no-stor...	image/jpc
404	HTTP	rd78.jiscs.com	/favicon.ico	700		text/htr
302	HTTP	rd78.jiscs.com	/RD78/i/RDCERN45252GL.PDF	144	no-stor...	text/htr
302	HTTP	www.jiscs.com	/	154	private	text/htr
200	HTTP	www.jiscs.com	/Article.aspx?a=0	93,123	private	text/htr
200	HTTP	www.jiscs.com	/site.css	3,940		text/css



Exploitation chain





Commercial EK

- Strong consolidation of the underground market/economy
 - Severe competition between a handful of exploit kits (EK)
 - Huge progress on time-to-market for exploits
 - Only hours/days before vulnerabilities available in EK
 - CVE-2015-0311 discovered as a Flash “0-day” in Angler EK

	Nuclear Exploit Kit	Sweet Orange Exploit Kit	FlashPack Exploit Kit	Rig Exploit Kit	Angler Exploit Kit	Magnitude Exploit Kit	Fiesta Exploit Kit	Styx Exploit Kit
Internet Explorer	CVE-2013-2551	CVE-2013-2551 CVE-2014-0322 CVE-2014-6332	CVE-2013-2551 CVE-2013-3918 CVE-2014-0322	CVE-2013-2551	CVE-2013-2551	CVE-2013-2551	CVE-2013-2551	CVE-2013-2551
Microsoft Silverlight	CVE-2013-0074			CVE-2013-0074	CVE-2013-0074		CVE-2013-0074	CVE-2013-0074
Adobe Flash	CVE-2014-0515 CVE-2014-0569	CVE-2014-0515 CVE-2014-0569	CVE-2013-0634 CVE-2014-0497 CVE-2014-0515 CVE-2014-0569	CVE-2014-0569	CVE-2014-0515 CVE-2014-0569	CVE-2014-0515	CVE-2014-0497 CVE-2014-0569	CVE-2014-0515
Adobe Acrobat/Reader	CVE-2010-0188						CVE-2010-0188	
Oracle Java	CVE-2012-0507		CVE-2013-2460 CVE-2013-2471		CVE-2013-2465		CVE-2012-0507	
XMLDOM ActiveX	CVE-2013-7331			CVE-2013-7331	CVE-2013-7331			CVE-2013-7331

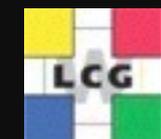


Angler EK

- Most advanced and impressive EK on the market (personal)
- AV & VM detection
- Payload encryption (downloaded/decrypted/run in memory)
- Fileless infection
- Flash 0-days included
 - They find/exploit unknown critical vulnerabilities
 - Patch reversing time usually ~12-72h
- New functionalities (June-July 2015):
 - Almost daily URL pattern changes
 - Nightmare for intrusion detection systems
 - On the same day:

```
GET /search?q=83BSsssxuKmVflc&e=EySVux4H_XB&m=7ZXv8S1sBk-zN0Ep2mzDDG0&c=ULZCSavvL9MENuMG&i=-YpM&nm=5eDP00Sw3vGeel
GET /probably.hyperesources?of=&determine=4tv&consider=&read=8Tny1P&against=47f9Ey_Mv&change=lK2DKvih&authority=
GET /bank.wpx?unite=J9dy0B4XAX&find=4dutLN&strike=p2e97CjAmk&with=9GW&physical=Ke75&stage=opV0zYb&death=qoJHCgzl
```

```
GET /search?q=k&bu=ufJP5Xn&qo=iHwkDjTU&t=15TmUes-GERoA3BqHGAj&qw=8kqIpe3UoTKob&k=o_och6UKbdopcqW0Ao&p=y62Z5ej8
GET /college.ashx?opinion=tb9YE&along=5YPELI1F0g&almost=&board=84x&late=&no=H0QG_j&simple=7_L&county=djnEoi&ha
GET /family.xhtm?structure=&express=t3JI&respect=yBCH&facility=&certain=2iR61htz&finally=LNg9t&report=BCxM1loU
```





Angler EK

- Plenty of schemes

WARNING

We have encrypt your files with CryptoLocker virus

- ESET Case study:

http://www.welivesecurity.com/wp-content/uploads/2014/12/torrent_locker.pdf

- Torrent Locker (~9 months study)

– Out of 39,670 infected systems, 570 or 1.45% have paid the ransom to the criminals

These 570 payments made to the gang tell us they made between US\$292,700 and US\$585,401 in Bitcoins

- Cryptowall 3.0

– Used to come via a “dropper” (multiple exploits, heavy)

– EK (Angler, Magnitude, etc.) now directly serving as a payload

- More details: <http://sentrant.com/2015/05/12/briefing-angler-exploit-kit/>



Dyre/Upatre & Dridex

- 90%+ of breaches caused by spear phishing
 - Extremely effective (“shooting phish in a barrel”):
 - 10 emails = 1 click guaranteed
 - Targeted phishing: ~70% success rate
 - HEPiX 2015: 9% click rate (good + technical audience!)
- Dyre/Upatre collaborating malware - Banking trojans
 - Use I2P anonymization network
 - Steal credentials, banking details, sensitive corporate data
- Antivirus highly ineffective
 - Attacker prepare an undetected variant of the malware
 - Attacker send a short, high intensity burst of spam, 2-8h
 - Malware is NOT detected
 - AV informed, update signature within 12-24h
 - Attacker repeat steps daily



Learn & adapt

- Protect your people:
 - Raise awareness
 - Organise training events (tools, methods)
 - Write and advertise clear policies
 - Do not overlook personal use and devices
- Protect your organisation
 - Understand your adversaries
 - Invest resources to have sufficient in-house capabilities
 - Contribute to global efforts against cybercrime (botnet takedown...)
 - Build your network of contacts in the security community
 - Invest in threat intelligence and technical means to use it
 - Treat security incidents as part of normal operations



Raising the bar





Getting “80%” protected

- Mail, or instant messaging
 - Absolutely never click on links from emails
 - Preferably go directly to the homepage of the website
 - If not easily possible, copy/paste and carefully verify the link
 - Malware comes via links or attachments (PDF, DOC, PPT)
 - Unexpected email? Unknown sender? Unusual language? Factual mistakes and typos? Unusual request or practices?
- Web: Stop. Think. Click.
 - Prefer Chrome, or at least Firefox, over Internet Explorer
 - Use a different Web browser for personal & professional use
 - Never click on popup windows or on “update” links for Flash or other plugins
 - If possible, disable or at least configure “click-to-play” for Flash
 - Do not install plugins or extensions. Absolutely never install drivers, video codecs, video players, add-ons bars



Getting “80%” protected

- Computers
 - Keep up-to-date with security patches. Enable automatic patching
 - Run a good anti-virus
 - Install or update from trusted sources only (your lab, Apple App Store, directly from the official vendor website). Never CNET/download.com, etc.
- Phones
 - Android is the primary target for malware
 - Many Android phones very difficult to patch and very quickly unsupported
 - Think before installing (check permissions required, user reviews, number of downloads, etc.)



Questions?