<b>OPINION - TECHNICAL REPORT</b>
NIKOLAOS VASILAKOS
IT and Communications Specialist
Trainer and Associate of the Cybercrime Prosecution Directorate
Researcher - Forensic Technician
Digital Evidence Examiner
Subject of Digital Evidence Research
The investigation of digital convictions and its totality of convictions
file concerning the case of Sergio Giuliani Nita who is accused of the
acts of: 1. Conspiracy to defraud the United States with respect to
tax laws, 2. Conspiracy to commit fraud and 3. Conspiracy to
committing money laundering.

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# Case files taken into account:

1. Sergio Giuliani Nita's application dated 02/08/2021 to the Ministry of Justice, Transparency and Human Rights.

2. No. Prot. 42196/04-08-2021 response of the General Directorate of Special Legal Affairs and Human Rights of the Ministry of Justice.

3. No. Prot. 2307/19-07-2021 Document of the Appellate Prosecutor's Office of Patras.

4. No. Prot. 2299/19-07-2021 Order of Temporary Arrest of the Appellate Prosecutor's Office

Patron.

5. No. Prot. 3880/09-08-2020 translated document of the Community Town Hall Brandoulets.

6. No. Prot. 45001 FEA 2069/15-09-2021 document of the General Directorate of Special Legal Affairs and Human Rights of the Ministry of Justice.

# A. The following documents were considered, among others:

1. Interpol arrest warrant No. A 5060/62021.

2. Series of digital photos with dates taken between the time period 2014-2016.

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3. Series of photos with dated social media posts (facebook) from the defendant's personal account.

# B. Based on all the aforementioned, it was requested to be answered with a scientific criterion the <u>following questions:</u>

1. What is the tax refund process? What is needed for each tax refund application in the system, which actors are involved and which processes are activated? Please in the answer also refer to the technical parameters of your specialty.

2.Is it possible to hack the process by script/human/user/hacker/cracker?

3. You can research examples of searches with the nicknames found in case file on the Internet?

4. What is and how does identity theft happen online?

5. Any other observation within the scope of your competence deemed useful for the case.5.1 What is the captcha, which is in the process, why is it not overcome?

5.2 The process requires a mobile phone for each return. It becomes one to procure american mobile number online;

5.3 Is a unique web browser fingerprint required for each return?

5.4 Can the defendant's affiliation be confirmed?

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5.5 Does the defendant have devices?

5.6 What is the botnet cluster the defendant is accused of?

6. What technical skills and knowledge does the cluster or botnet need?

# C. BACKGROUND - FINDINGS

## D. ANSWERS TO THE QUESTIONS ASKED

1. What is needed for each tax refund application in the system, which agencies involved and what processes are activated? Please in the answer to also refer to the technical parameters of your specialty.

The process of applying for a tax refund in the US can be done in several ways ways. Two main categories of procedure are filing the application in person to the relevant department and the deposit electronically. As in Greece, procedure can be handled either by the taxpayer himself, or by persons or companies that offer accounting services.

The exact process for filing the application in the IRS online system is under construction constant changes as at least in the last 15 years the said system has been target of long-range cyber-attacks repeatedly.

Material from the critical years 2014 – 2016 was investigated to establish which process was in place then and what safeguards did the IRS system have at that time period. For each tax refund application it was necessary to pres

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- Copies of previous tax returns that were filed and related to
declarations of income, real estate, tax refund, etc. It is recorded that she
at the time, such copies could be obtained in person
to the competent agency, by mailing them to the taxpayer's home or
in specific cases to be obtained online in case they had
registered in the online system. Today most of this process
is completed online.
- Full personal details of the taxpayer, ie: name, address
tax residence, date of birth, social security number, address
e-mail, bank account details, full details
of dependent members (spouse - children), previous residential addresses and number

landline corresponding to the place of residence. In case of registration mobile phone, the number code should also correspond to the location residence. (see question 5.2 below)

During the process of online registration of the application, as a security measure the system asked by the applicant to answer questions of a personal nature in order to establish his identity. Examples of such questions could be: "What color was the car you were driving in 2008?", "how much was your monthly loan payment card?", "what is the name your neighbors call you by?' and others similar

In addition, the following were found:

For the tax refund, it was possible to register a bank account which has been opened in online banking. Indications for opening an account and obtaining a card to Green Dot Bank which is a popular choice, should be provided full personal details of the owner, identical to those required in the return application file a tax return with the IRS, answer personal security questions and register cell phone number. To connect a Green Dot account with the transit service

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of PayPal payments, the same information for the opening an account at Green Dot bank as well as registering a debit number card of the associated bank.

It is noted that it is common in the process of registering a tax refund application on US to be used online proxy platforms that offer friendly to user interaction environment and give step-by-step instructions for entering answers necessary data and supporting documents. Examples of such applications are "Turbo Tax" which it is also the most popular, "TaxAct" etc. (...)

# 2. It is possible to violate the process by script/human/user/hacker/cracker?

The process of breaching the process is possible but requires high expertise, vs much greater than that of an everyday user. The IRS system in the US has has been targeted repeatedly in the past by cyber-criminals and continues to targeted to date.

A basic prerequisite for breaching the IRS system is gaining access to all required personal data of a taxpayer. This access is obtained either by various techniques of stealing a person's identity information or by purchasing services from illegal circuits on the dark web that provide access to existing bases data with personal information of citizens that have already been intercepted by various (one of them is through the use of botnets). In order for the breach of the system to be massive in nature so as to increase the chances of successful access but also to hide the identity of the perpetrators from the prosecution authorities, it is common to use a botnet system that through malicious software the attacker can simultaneously execute thousands of commands through infected devices from all over the world. This makes simultaneous input possible on the system with stolen information of thousands of users.

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In addition, similar incidents of IRS system violations were investigated specifically against
critical period 2014 – 2016. Reference found in New York Times article about attack
into the IRS system in 2015 with identity theft for over 100,000
taxpayers and a loss of over \$50 million in illegal
tax refunds.
Then-IRS Commissioner John Koskinen had stated "We are confident that this is not about
amateurs. These are actually organized crime syndicates that
it's not just us, but everyone in the financial industry. [] 80% of
incidents of identity theft we deal with and refund fraud
is related to organized crime here and around the world. These are excellent
sophisticated criminals with access to vast amounts of data."
3. You can research examples of searches with the aliases that exist
do they have on file on the Internet?
Online searches of the nicknames "giulonline" and
- Google search results for the nickname "Giulonline"
2015
https://www.avocatnet.ro/forum/discutie_490033/PFA-II-sau-SRL-pentru-ta-
rani.html
opened i <u>n Commercial Com</u> panies
PFA, II or SRL for farmers?
giulonline
User
00:05, June 8, 2015
Hello, it's me

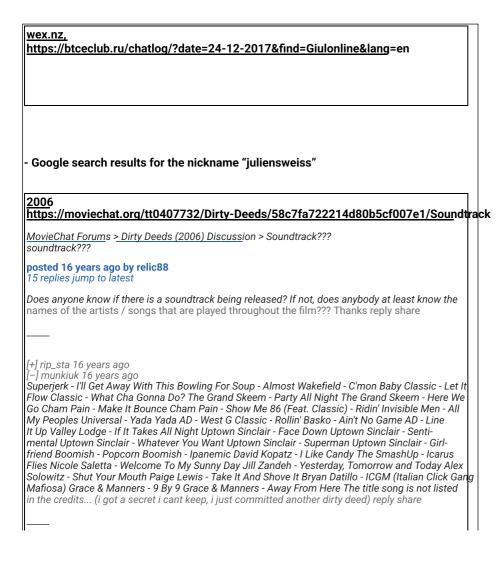
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Б

owner of a small animal farm and want to develop in the futur	e with the help of European non-
revolving funds in the past I had an LLC that was successfu	lly closed after a long process-
sia so in SRL -D I can't fit.	
At the moment there are 110 sheep and goats, 12 pregnant so	ws and 4 pregnant cows.
At the moment I don't sell products or animals, but from next y	year I want to sell traditionally
products made on my own farm.	
I am the owner of a place in Pitesti which can be arranged and	l authorized as a point of
consumption of food. (family owned but you can rent in ** sol	ution **)
I state that in the store I will sell my products (for which I am a	applying for a certificate of
manufacturer from the town hall) and the products of other co	mpatriots with a manufacturer's certificate.
Another question would be: do I have to be VAT liable to be ab	
Now I don't know what to choose from the 3 options.	
II	

please help me with your opinions to choose the best solution for me.	I	I
Thanks in advance Last modified: Monday, June 8, 2015 giulonline , user		
https://www.avocatnet.ro/forum/discutie_490171/cod-CAEN-ferma-de-porci-si-desfacere-produse-i	n-ı	mag
<u>azin-propriu.html#mod</u> al		
opened in t <u>he New CANE Code 20</u> 08 CAEN code pig farm and products produced in its own shop		
giulonline User 18:25, June 8, 2015		
Hello, I currently have a farm number at town hall for the animals I have but I want to make it legal business and sell the products in my own store through an SRL. Please tell me which CAEN codes I need for a farm with cows, pigs, sheep, goats and fowls (in other words mixed).		
Thank you		
<u>2017</u>		

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[–] shuchen90 16 years ago

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Yeah... are these tracks very old? or what :S reply share [-] sako\_81 16 years ago I can't find any of these tracks!!! I'm still looking for the song from the 5th deed. reply share [-] raw\_kinetic 16 years ago WHERE DO I GET ITALIAN CLICK GANG MAFIOASA ? there is no Bryan Datillo who sings this.. please some pointers.. reply share [-] juliensweiss 16 years ago well, if someone found at least some of the songs, please post here ... i could find none :) reply share [-] bornb\_2004 16 years ago People i just need to know the melody before deed 7....the one with meg in car wishing good luck....PLEASE :D reply share [-] shuchen90 16 years ago I Need this track Nicole Saletta - Welcome To My Sunny Day pff its very hard to find these tracks reply share <u>2006</u> https://moviechat.org/tt0407732/Dirty-Deeds/58c7fa712214d80b5cf00731/Soundtrack Soundtrack **posted 16 years ago by juliensweiss** 5 replies | jump to latest So, after all, did anyone find any of the songs on the soundtrack? :) reply share [-] icredibilu00 16 years ago me no reply share 20<u>08</u> https://www.linuxquestions.org/questions/linux-networking-3/problem-with-routing-via-different-external-interfaces-eth-and-tun-669678/

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09-13-2008, 07:45 AM		
juliensweiss LQ Newbie Registered: September 2 Posts: 2 <b>Rep: Problem with routi</b>	® (eth and tun)	
Registered: September 2 Posts: 2		
Rep: Problem with routi	[ <u>Log in</u> to get rid of this advertisement] hHello,	

eth0:0 xx.xx.xx.19 bcast xx.xx.23 mask 255.255.255.248 tun0: yy.yy.yy.84 ptp yy.yy.y84 mask 255.255.255.255
default route is xx.xx.17
I need a Dante socks server to run on the machine, to accept incoming connections on eth0, and to use tun0 interface for outgoing connections, but at the same time keep the default gateway via eth0.
Dante server does support selecting, different interfaces, so with this configuration:
internal: eth0 port = 1090 external: tun0
should work but no traffic gets through When I use the eth0:0 interface for outgoing traffic, it works, but when i switch to the tunnel, it doesn't.
Also, if i add an eth1 with internal ip addresses, like: eth1: 192.168.1.1 netmask 255.255.255.0 , and i try using the ppp0 interface for nat, same result. If i nat via eth0:0 ip, everything works fine
I would appreciate some help with this.
The OS is CentOS release 4.6 (Final), kernel 2.6.9-67.0.4.EL #1
Thanks, Julien
Last edited by juliensweiss? 09-13-2008 at 07:48 AM. Reason: added OS ve

•	#2
juliensweiss LQ Newbie	Got a solution
Registered: September 2008 Posts: 2	After reading a cached google document <u>http://74.125.95.104/search?q=cache:nk&amp;cd=28&amp;g</u> l=us I found a solution. I don't know if its the best one, but it seems to work.
Original Poster	WORK.
rep: •	first, have to tune dante socks server as user sockd , uid 501 and change the configuration to: internal: eth0 port = 2003 external: eth0
	echo "151 conn1" >> /etc/iproute2/rt_tables
	ip rule add fwmark 1 table conn1
	iptables -t mangle -A OUTPUT -p tcpsport ! 2003 -m owneruic owner 501 -i MARKset-mark 1
	iptables -t nat -A POSTROUTING -p tcpsport ! 2003 -o tun0 -j S to-source=tun0_ip
	iptables -t mangle -A OUTPUT -p udpsport ! 2003 -m ownerui owner 501 -j MARKset-mark 1 iptables -t nat -A POSTROUTING -p udpsport ! 2003 -o tun0 -j \$ to-source=tun0_ip
	ip route add default dev tun0 table conn1
	echo 0 > /proc/sys/net/ipv4/conf/eth0/rp_filter echo 0 > /proc/sys/net/ipv4/conf/tun0/rp_filter
	Now all traffic from the dante servers goes via tun0
	If anyone knows a better way, please let me know.
	Thank you

IE.

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<u>2010</u> https://bugs.launchpad.net/ubuntu/+source/linux/+bug/518196

Activity log for bug #518196

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Date Who What	changed	Old value Ne	w value		Message
2010-02-06 21:33:	5 <u>3 jsw</u> eis	s bug			added bu
2010-02-06 21:58:	4 <u>0 Mi</u> tch <u>Town</u> er		-docs (Ubuntu)	Linux (Ubuntu)	
2010-02-10 19:07:	0 <u>3 Jere</u> m <u>Foshe</u> e		New Incon	<i>w</i> lete	
2010-02-10 19:57:	2 <u>1 jsw</u> eis	s attachment added AlsaDe	vices.txt htt	<b>nd/lanen/J9ฌฌฟม3/A</b> lsaDevices.txt	
2010-02-10 19:57:	2 <u>6 jsw</u> eis	s attachment added AplayD	evices.txt h	t <b>ipr//tæu/8£Ю24£9444/Ap</b> layDevices.txt	
2010-02-10 19:57:	3 <u>2 jsw</u> eis	s attachment added BootDn	esg.txt http	vi <b>∰aneu/B90241945/B</b> ootDmesg.txt	
2010-02-10 19:57:	3 <u>6 jsw</u> eis	s attachment added Card0.4	mixer.valu	a <b>sınıdı/89//2494</b> 7/ipadlibrar- Card0.Amixer.values.txt	
2010-02-10 19:57:	4 <u>0 jsw</u> eis	s attachment added Card0.0	odecs.code	ต่ <i>ดเปรดะไปสี่มี1997/14048/hpadlibrar-</i> Card0.Codecs.codec.0.txt	
2010-02-10 19:57:	4 <u>3 jsw</u> eis	s attachment added Card0.0	odecs.code	ต่ <b>สนาวตะไว่เวิอว์/2446ธ</b> ัน/hpadlibrar- Card0.Codecs.codec.1.txt	
2010-02-10 19:57:	4 <u>7 jsw</u> eis	s attachment added Card1.0	odecs.code	ต่ <i>ฒนต</i> ะไ <del>/ปีชุว/21466</del> W/hpadlibrar- Card1.Codecs.codec.0.txt	
2010-02-10 19:57:	5 <u>5 jsw</u> eis	s attachment added Current	Dmesg.txt	h <b>ittp://ki/B9Cl249GB/Cur</b> rentDmesg.txt	
2010-02-10 19:57:	5 <u>8 jsw</u> eis	s attachment		li <b>amahj/adib#</b> 860/IwConfig.txt	
2010-02-10 19:58:	0 <u>2 jsw</u> eis	s attachment added Lspci.tx	t http://lau	nahpnell/189024962/Lspci.txt	
2010-02-10 19:58:	0 <u>6 jsw</u> eis	s attachment added Lsusb.t.	xt http://lau	nahpred/199004964/Lsusb.txt	
2010-02-10 19:58:		added PciMuli	imedia.txt	tittp://ea/39Cl2496ElPaiMultimedia.txt	
2010-02-10 19:58:	1 <u>3 jsw</u> eis	s attachment added ProcCp	uinfo.txt ht	pi#ane#B902#968/ProcCpuinfo.txt	
2010-02-10 19:58:	1 <u>6 jsw</u> eis	s attachment added ProcInt	errupts.txt	hitm/flat/800249110/RrocInterrupts.txt	
2010-02-10 19:58:		added ProcMo	dules.txt h	<b>ipn//het/89Q24H711/Rr</b> ocModules.txt	
2010-02-10 19:58:	-	added RfKill.t	ct.	http://launchpadlibrarian.net/39024973/Rf	Kill.txt
2010-02-10 19:58:	3 <u>7 jsw</u> eis	s attachment added UdevDł	.txt	http://launchpadlibrarian.net/39024986/Ud	evDb.txt

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2010-02-10 19:58:.	5 <u>9 jsw</u> eis	s attachment added UdevLo	g.txt http://	liamnht/adlib501t-0/UdevLog.txt	
2010-02-10 19:59:	0 <u>3 jsw</u> eis	s attachment added Xsessio	nErrors.txt	<b>http://ddB9021500tBjBases</b> ionErrors.txt	
2010-02-10 19:59:	0 <u>7 jsw</u> eis	s linux (Ubunti status	Incomplete	e New	
2010-02-10	<u>jsweiss</u> t	ags		apport-collected	

19.59.12							
Intel iwlagn drive Bug #518196 rep				б			
32 This bug affects	4 people	9					
Affects Status II	mportan	ce Assigned t	o Milesto	ne linux (Ubunt	u) Expired Lo	w Unassigned	
	_						
Bug Description							

Binary package hint: ubuntu-docs

Hello, I have a problem with the iwlagn driver. everything works perfect, except it somehow "hangs" from time to time. There is no exact time frame for hanging, sometimes it works perfectly for days, other times dies 2 times in 10 minutes. The wireless network disconnects, and it does not show any available network (the AP is not the problem, as other devices do work. also there is not a hardware issue, because on windows i did not have this problem). When the wifi adapter hangs, i get this in the dmesg:

[7952.460205] wlan0: no probe response from AP XX:XX:XX:XX: disassociating [7953.060210] iwlagn 0000:05:00.0: Error sending REPLY\_RXON: timed out after 500ms. [7953.060223] iwlagn 0000:05:00.0: Error setting new RXON (-110) [7953.560245] iwlagn 0000:05:00.0: Error sending RE-PLY\_SCAN\_CMD: time out after 500ms. [7954.060057] iwlagn 0000:05:00.0: Error sending RE-PLY\_RXON: time out after 500ms. [7954.060069] iwlagn 0000:05:00.0: Error sending RE-PLY\_RXON: time out after 500ms. [7954.060069] iwlagn 0000:05:00.0: Error sending NE-PLY\_RXON: time out after 500ms. [7954.060069] iwlagn 0000:05:00.0: Error setting new RXON (-110) [7954.560235] iwlagn 0000:05:00.0: Error sending REPLY\_RXON: time out after 500ms. [7954.560247] iwlagn 0000:05:00.0: Error setting new RXON (-110) [7959.060105] iwlagn 0000:05:00.0: Error sending REPLY\_RXON: timed out after 500ms. [7959.060116] iwlagn 0000:05:00.0: Error setting new RXON (-110) [7959.560264] iwlagn 0000:05:00.0: Error sending REPLY\_SCAN\_CMD: timeout after 500ms. [7960.060248] iwlagn 0000:05:00.0: Error sending REPLY\_RXON: time out after 500ms. [7960.060260] iwlagn 0000:05:00.0: Error setting new RXON (-110)

The only solution for the wifi network to recover is to remove and then re-insert the module. If i use the wireless on/off switch on the laptop, it still does not work. If i do: rmmod iwlagn iwlcore modprobe iwlagn modprobe iwlcore the wifi card finds the access point again.

The system is as follows: Linux user-laptop 2.6.31-19-generic #56-Ubuntu SMP Thu Jan 28 02:39:34 UTC 2010 x86\_64 GNU/Linux Ubuntu 9.10

System is a Sony Vaio VGN-SR59VG (german version), and the wireless adapter is \*-network de-

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scription: Wireless interface product: Wireless WiFi Link 5100 vendor: Intel Corpora- tion physical id: 0 bus info: pci@0000:05:00.0 logical name: wmaster0 version: 00 serial: xx:xx:xx:xx:xx width: 64 bits clock: 33MHz capabilities: pm msi pciex- press bus_master cap_list logical ethernet physical wireless configuration: broadcast=yes driver=iwlagn ip=192.168.1.101 latency=0 multicast=yes wireless=IEEE 802.11abgn resources: irq:31 memory:d1500000-d1501fff							
This is getting annoying sometimes, espec times in 10 minutes.	ially because s	ometimes it w	orks for	ways, other t	times it die		
Any help would be appreciated.							
Julien							
Tags: apport-collected karmic kj-expired re	gression-poten	tial					
Mitch Towner (kermiac) wrote on 2010-0	02-06:				<u>#</u> 1		
not an ubuntu-docs issue			ľ				
affects :	ubuntu-do	cs (Ubuntu)	$\rightarrow$ 1	inux (Ubu	ntu)		
Jeremy Foshee (jeremyfo- shee) wrote on 2010-02-10:		<u>#2</u>					
jsweiss, Please run 'apport-collect -p linux attached to this bug.	: 518196' so th	at the collecte	d logs f	or this issue	can be at-		
Thanks!							
-JFo							
Changed in linux (Ubuntu):							
status :			New	→ Incomp]	Lete		
jsweiss (juliensweiss) wrote on 2010	0-02-10: app	ort-collect da	ata		<u>#3</u>		

2

Architecture: amd64 ArecordDevices: \*\*\*\* List of CAPTURE Hardware Devices \*\*\*\* card 0: Intel [HDA Intel], device 0: ALC262 Analog [ALC262 Analog] Subdevices: 1/1 Subdevice #0: subdevice #0 AudioDevicesInUse: USER PID ACCESS COMMAND /dev/snd/controlC0: user 4085 F... pulseaudio CRDA: Error: [Errno 2] No such file or directory Card0.Amixer.info: Card hw:0 'Intel/'HDA Intel at 0xd5200000 irq 22' Mixer name : 'Realtek ALC262' Components : 'HDA:10ec0262,104d2d00,00100302 HDA:14f12c06,104d1700,00100000' Controls : 18 Simple ctrls : 11 Card1.Amixer.info: Card hw:1 'HDMI'/'HDA ATI HDMI at 0xd0030000 irq 17' Mixer name : 'ATI R6xx HDMI' Components : 'HDA:1002aa01,104d2d00,00100100' Controls : 4 Simple ctrls : 1 Card1.Amixer.values: Simple mixer control 'IEC958',0 Capabilities: pswitch pswitch-joined Playback channels: Mono Mono: Playback [off] DistroRelease: Ubuntu 9.10 InstallationMedia: Ubuntu 9.10 "Karmic Koala" - Release amd64 (20091027) MachineType: Sony Corporation VGN-SR59VG\_H NonfreeKernelModules: fgIrx Package

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linux (not installed) ProcCmdLine: BOOT\_IMAGE=/vmlinuz-2.6.31-19-generic root=UUID=2cebe356-2708-47eb-9821-27eba1d664e8 ro quiet splash ProcEnviron: SHELL=/bin/bash PATH=(custom, user) LANG=en\_US.UTF-8 ProcVersionSignature: Ubuntu 2.6.31-19.56-generic RelatedPackageVersions: linux-backports-modules-2.6.31-19-generic N/A linux-firmware 1.25 Uname: Linux 2.6.31-19-c neric x86\_64 UserGroups: adm admin cdrom dialout Ipadmin plugdev sambashare www-data WifiSyslbg: dmi.bios.date: 08/05/2009 dmi.bios.vendor: American Megatrends Inc. dmi.bios.version: R4090Y1 dmi.board.asset.tag: N/A dmi.board.name: VAIO dmi.board.vendor: Sony Corporation dmi.board.version: N/A dmi.chassis.asset.tag: N/A dmi.chassis.type: 10 dmi.chassis.vendor: Sony Corporation dmi.chassis.version: N/A dmi.modalias: dmi:bvnAmericanMegatrendsInc.:bvrR4090Y1:bd08/05/2009:svnSonyCorporation:pnVGN-SR59VG\_H:pvrC60389VN:rvn-SonyCorporation:rnVAIO:rvrN/A:cvnSonyCorporation:ct10:cvrN/A: dmi.product.name: VGN-SR59VG\_H dmi.product.version: C60389VN dmi.sys.vendor: Sony Corporation jsweiss (juliensweiss) wrote on 2010-02-10: AlsaDevices.txt AlsaDevices.txt Edit (643 bytes, text/plain) jsweiss (juliensweiss) wrote on 2010-02-10: AplayDevices.txt AplayDevices.txt Edit (263 bytes, text/plain) jsweiss (juliensweiss) wrote on 2010-02-10: BootDmesg.txt  $\frac{\pi}{6}$ BootDmesg.txt Edit (51.9 KiB, text/plain) jsweiss (juliensweiss) wrote on 2010-02-10: Card0.Amixer.values.txt Card0.Amixer.values.txt Edit (2.2 KiB, text/plain) jsweiss (juliensweiss) wrote on 2010-02-10: Card0.Codecs.codec.0.txt Card0.Codecs.codec.0.txt Edit (10.6 KiB, text/plain) jsweiss (juliensweiss) wrote on 2010-02-10: Card0.Codecs.codec.1.txt Card0.Codecs.codec.1.txt Edit (146 bytes, text/plain)

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jsweiss (juliensweiss) wrote on 2010-02-10: Card1.Co- decs.codec.0.txt	# 1 0
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<ul> <li>Card1<u>Codecs.codec.0.txt Edit (76</u>1 bytes, text/plain)</li> </ul>	
j <u>sweiss (juliensweiss</u> ) wrote on 2010-02-10: Cur- rentDmesg.txt	# 1 1
• CurrentDmesg.txt Edit (79.3 KiB, text/plain)	
j <u>sweiss (julienswei</u> ss) wrote on 2010-02-10: IwCon- fig.txt	# 1 2
• IwConfig.txt Edit (617 bytes, text/plain)	•
j <u>sweiss (juliensw</u> eiss) wrote on 2010-02-10: Lspci.txt	# 1 3
• Lspci.txt Edit (15.6 KiB, text/plain)	
jsweiss (juliensweiss) wrote on 2010-02-10: Lsusb.txt	# 1 4
• Lsusb.txt Edit (742 bytes, text/plain)	
j <u>sweiss (julienswe</u> iss) wrote on 2010-02-10: PciMulti- media.txt	# 1 5
• PciMultimedia.txt Edit (1.2 KiB, text/plain)	<b>_</b>
jsweiss (juliensweiss) wrote on 2010-02- 10: ProcCpuinfo.txt	# 1 6
• ProcCpuinfo.txt Edit (1.5 KiB, text/plain)	
jsweiss (juliensweiss) wrote on 2010- <u>02-10: R</u> e: [Bug	<u>#</u>

# OPINION – TECHNICAL REPORT NIKOS VASILAKOS page 18 of 57

518196] Re: Intel iwlagn driver hangs from tim that time	e		<u>1</u> 7
Done. Thanks Jeremy Foshee wrote: > jsweiss, > Please run 'ap logs for this issue can be attached to this bug. > > Thank Status: New => Incomplete > >			
j <u>sweiss (juliensw</u> eiss) wrote on 2 <b>010-02-10: Pro</b> rupts.txt	cInter-		# 1 8
• ProcInterrupts.txt Edit (1.7 KiB, text/plain)		•	
jsweiss (juliensweiss) wrote on 2 <b>010-02-10: Pro</b> ules.txt	cMod-		# 1 9
• ProcModules.txt Edit (5.1 KiB, text/plain)	L		
jsweiss (juliensweiss) wrote on 2010-02-10: Rfl	Gill.txt		# 2 0
• RfKill.txt Edit (175 bytes, text/plain)	1	· · · · · · · · · · · · · · · · · · ·	
jsweiss (juliensweiss) wrote on 2010-02- <b>10: UdevDb.txt</b>			# 2 1

	# 2 2
·	
Xsession-	# <u>2</u> 3
	•
	Xsession-

# OPINION – TECHNICAL REPORT NIKOS VASILAKOS page 19 of 57

Changed in linux (Ubuntu):				
<pre>sta- here:</pre> Incomplete → New				
tags : added: apport-collected Jeremy Foshee (jeremyfoshee) on 2010-02-10				
tags : added: karmic				
dave945 (dave-dtabor) wrote on 2010-02-17:				<u>#</u> 2 4
l think I may have the same or a similar bug. Ubuntu Karr think a kernel patch may have done me in. Here's the info		ver	y well until yesterda	iy and
<u>dave945 (dave-dtabo</u> r) wrote on 2010-02-17:				<u>#</u> 2 5
• laptop-diags.txt Edit (9.4 KiB, text/plain)			I	
dave945 (dave-dtabor) wrote on 2010-02-17: <b>apport-collect data</b>				<u>#</u> 26
Architecture: i386 ArecordDevices: **** List of CAPTURE				
device 0: CONEXANT Analog [CONEXANT Analog] Subde dioDevicesInUse: USER PID ACCESS COMMAND /dev/sn pulseaudio CRDA: Error: [Errno 2] No such file or directory at 0xfc220000 irq 17' Mixer name : 'Conexant CX20561 (I 'HDA:14f15051,17aa2100,00100000 HDA:14f12c06,17aa 7 CheckboxSubmission: 78f0d12e26671bc09b495230bb bb422ca46d02494cdbc459927a98bc2f DistroRelease: U SUME=UUID=0a6b324d-4259-494d-945f-5fd16b10475c1 Release i386 (20091028.5) MachineType: LENOVO 2082: dent: Socket 0: no product info available PccardctlStatus	d/controlC0: tab y Card0.Amixer.i Hermosa)' Comp 2122,00100000 082922 Checkb buntu 9.10 Hibe installationMedia 3GU Package: lii	oord nfo: oone ' Co oxS rnat a: Ui nux	1998 F Card hw:0 'Intel'/'H ents : ntrols : 14 Simple c ystem: tionDevice: RE- buntu 9.10 "Karmic (not installed) Pcca	DA Int trls : Koala

# OPINION – TECHNICAL REPORT NIKOS VASILAKOS page 20 of 57

guiet splash ProcEnviron: SHELL=/bin/bash LANG=en\_US.UTF-8 ProcVersionSignature: Ubuntu 2.6.31-19.56-generic RelatedPackageVersions: linux-backports-modules-2.6.31-19-generic N/A linuxfirmware 1.25 Uname: Linux 2.6.31-19-generic i686 UserGroups: adm admin cdrom dialout |padmin plugdev sambashare dmi.bios.date: 04/22/2009 dmi.bios.vendor: LENOVO dmi.bios.version: 7VET66WW (2.16) dmi.board.name: 20823GU dmi.board.vendor: LENOVO dmi.board.version: Not Available dmi.chassis.asset.tag: No Asset Information dmi.chassis.type: 10 dmi.chassis.vendor: LENOVO dmi.chassis.version: Not Available dmi.modalias:

dmi:bvnLENOVO:bvr7VET66WW(2.16):bd04/22/2009:svnLENOVO:pn20823GU:pvrThink-PadT500:rvnLENOVO:rn20823GU:rvrNotAvailable:cvnLENOVO:ct10:cvrNotAvailable: dmi.product.name: 20823GU dmi.product.version: ThinkPad T500 dmi.sys.vendor: LENOVO

dave945 (dave-dtabor) wrote on 2010-02-17: AlsaDe- vices.txt		<u>#</u> 27
• AlsaDevices.txt Edit (517 bytes, text/plain)	<b>i</b>	
dave945 (dave-dtabor) wrote on 2010-02-17: AplayDe- vices.txt		<u>#</u> 2 8
• AplayDevices.txt Edit (281 bytes, text/plain)		
dave945 (dave-dtabor) wrote on 2010-02- 17: BootDmesg.txt		<u>#</u> 2 9
• BootDmesg.txt Edit (63.6 KiB, text/plain)	I	T
dave945 (dave-dtabor) wrote on 2010-02- 17: Card0.Amixer.values.txt		<u>#</u> 30
• Card0 <u>.Amixer.values.txt Edit (1.5</u> KiB, text/plain)		T
dave945 (dave-dtabor) wrote on 2010-02- 17: Card0.Codecs.codec.0.txt		# 3 1
• Card0 <u>.Codecs.codec.0.txt Edit (5.0</u> KiB, text/plain)		
		_

#### **OPINION – TECHNICAL REPORT NIKOS VASILAKOS page 21 of 57**

dave945 (dave-dtabor) wrote on 2010-02- 17: Card0.Codecs.codec.1.txt	#1 31 2
• Card0 <u>.Codecs.codec.1.txt Edit (14</u> 6 bytes, text/plain)	I
dave945 (dave-dtabor) wrote on 2010-02-17: Cur- rentDmesg.txt	# 3 3
• CurrentDmesg.txt Edit (15.5 KiB, text/plain)	
dave945 (dave-dtabor) wrote on 2010-02-17: IwCon- fig.txt	#1 31 4
• IwConfig.txt Edit (567 bytes, text/plain)	
dave945 (dave-dtabor) wrote on 2010-02-17: Lspci.txt	# 3 5
• Lspci.txt Edit (19.3 KiB, text/plain)	•
dave945 (dave-dtabor) wrote on 2010-02-17: Lsusb.txt	<u>#</u>

• Lsusb.txt Edit (719 bytes, text/plain)	Ē	30
dave945 (dave-dtabor) wrote on 2010-02-17: I media.txt	PciMulti-	<u>#</u> 3 7
• PciMultimedia.txt Edit (588 bytes, text/plain)		
dave945 (dave-dtabor) wrote on 2010-02- 17: ProcCpuinfo.txt		<u>#</u> 3 8
• ProcCpuinfo.txt Edit (1.4 KiB, text/plain)	· · · ·	

# OPINION – TECHNICAL REPORT NIKOS VASILAKOS page 22 of 57

dave945 (dave-dtabor) wrote on 2010-02-17: ProcIn- interrupts.txt	# <u>3</u> 9
ProcInterrupts.txt Edit (1.7 KiB, text/plain)	
dave945 (dave-dtabor) wrote on 2010-02-17: ProcMod- ules.txt	## 4 0
ProcModules.txt Edit (3.2 KiB, text/plain)	
dave945 (dave-dtabor) wrote on 2010-02-17: RfKill.txt	# 4 1
• RfKill.txt Edit (182 bytes, text/plain)	
dave945 (dave-dtabor) wrote on 2010-02- 17: UdevDb.txt	# <u>4</u> 2
• UdevDb.txt Edit (120.1 KiB, text/plain)	
dave945 (dave-dtabor) wrote on 2010-02- 17: UdevLog.txt	<u>#4</u> <u>3</u>
UdevLog.txt Edit (250.8 KiB, text/plain)	
dave945 (dave-dtabor) wrote on 2010-02-17: WifiSys- log.txt	# <u>4</u> 4 4
v WifiSyslog.txt Edit (426.1 KiB, text/plain)	
dave945 (dave-dtabor) wrote on 2010-02-17: Xsession- Errors.txt	# 4 5
XsessionErrors.txt Edit (1.1 KiB, text/plain)	
dave945 (dave-dtabor) wrote on 2010-02-17:	<u>#</u> 4

			<u>6</u>
• laptop-diags.txt Edit (9.4 KiB, text/plain) this is a lenovo T500 laptop that dual-boots Ubuntu 9.10 Vista, which DOES connect to my network. The Wireless treme 802.11b/g/n of recent vintage. Dave	Karmic and and access point is an a	W W Windows Vi pple airport base sta	sssss t tion ex
dave945 (dave-dtabor) wrote on 2010-02-17:			# 4 7
<ul> <li>laptop-diags.txt Edit (9.4 KiB, text/plain) this is a lenovo T500 laptop that dual-boots Ubuntu 9.10 Vista, which DOES connect to my network. The Wireless treme 802.11b/g/n of recent vintage. Dave</li> </ul>			
Russell Robinson (russellr-openconcepts) wrote on 20 02-17:	10-		# 4 8
Similar problem on Dell Latitude E6500.			
/var/log/messages message is: ADDRCONF(NETDEV_U	P): wlan0: link is not	ready	
Didn't happen in Jaunty - only since upgrading to Karmic kernel update?	, and then only recer	tly (last week or so).	Recen
jsweiss (juliensweiss) wrote on 2010- <u>02-17: R</u> e <u>518196] Re: Intel iwlagn driver hangs from t</u> in <u>that ti</u> me			# 4 9
Forgot to mention the AP is a HUAWAI D100 router. But I			
phone, another laptop and this same laptop on Windows	with no issues. Also	nportant, as I have a I have not tried othe	Nokia er Linux
Jeremy Foshee (jeremyfoshee) wrote on 2010-02-25:	with no issues. Also	nportant, as I have a I have not tried othe	Nokia er Linux <u>#</u> 5 0
phone, another laptop and this same laptop on Windows distributions, as the laptop is new. Jeremy Foshee (jeremyfoshee) wrote on 2010-02-25:	with no issues. Also	) I have not tried othe	er Linux #
phone, another laptop and this same laptop on Windows distributions, as the laptop is new. Jeremy Foshee (jeremyfoshee) wrote on 2010-02-25:	with no issues. Also	) I have not tried othe	er Linux #
phone, another laptop and this same laptop on Windows distributions, as the laptop is new. Jeremy Foshee (jeremyfoshee) wrote on 2010-02-25: set to triaged with a low initial importance. This has bee	with no issues. Also	) I have not tried othe	er Linux #
phone, another laptop and this same laptop on Windows distributions, as the laptop is new. <u>Jeremy Foshee (jeremyfosh</u> ee) wrote on 2010-02-25: set to triaged with a low initial importance. This has bee -JFo <u>Changed in linux (Ubuntu):</u> status : New $\rightarrow$ Triaged	with no issues. Also	) I have not tried othe	er Linux #
phone, another laptop and this same laptop on Windows distributions, as the laptop is new. <u>Jeremy Foshee (jeremyfosh</u> ee) wrote on 2010-02-25: set to triaged with a low initial importance. This has bee -JFo <u>Changed in linux (Ubuntu)</u> ;	with no issues. Also	) I have not tried othe	er Linux #

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Chase Douglas (chasedouglas) wrote on 2010-02-26:			#51	
Could anyone affected please test two things:			<u></u>	+
I. linux-backports-modules-wireless-karmic-generic (new System -> Administration -> Software Sources b. Ensure software (universe)" is checked c. Install the linux-backp hrough apt-get install or through Synaptic Package Mar .ucid a. Download one of the daily lucid isos from http:// his in Lucid (you don't need to install it, just boot it up to	the ort nage /cd	box for "Community s-modules-wireless-l er) d. Restart and tes image.ubuntu.com/o	/-maintained Oper karmic-generic (ei st the new drivers	n Sourd ther 2.
f either of these seems to have the issue fixed we can ti fix the issue.	hen	begin to focus on fi	nding a particular	patch
Thank you				
dave945 (dave-dtabor) wrote on 2010-02-27:				<u>#</u> 5 2
<u>Download full te</u> xt (20.9 KiB) This did not get it working for me.				
Strangely, if I boot with a wired connection, my wireless	woi	ks, even if I disconn	ect eth0:	
Feb 27 17:02:19 tabord-laptop kernel: [ 14.108311] ADDI 27 17:02:19 tabord-laptop kernel: [ 14.109658] iwlagn 00				

2.ueode Feb 27 17.02:19 tabord labord kenver e ph1/1435137 avaah foobo ooxoo film Hwaie/Web.ES90d lbm-iwlwifi-5000-1.ucode Feb 27 17:02:19 tabord-laptop kernel: [14.249646] iwlagn 0000:03:00.0: ldaded firmware version 8.24.2.12 Feb 27 17:02:19 tabord-laptop kernel: [ 14.397123] Registered led device: iwlphy0::radio Feb 27 17:02:19 tabord-laptop kernel: [14.397141] Registered led device: iwl-phy0::assoc Feb 27 17:02:19 tabord-laptop kernel: [ 14.397156] Registered led device: iwl-phy0::RX Feb 27 17:02:19 tabord-laptop kernel: [14.397169] Registered led device: iwl-phy0::TX Feb 27 17:02:19 tabord laptop kernel: [14.416539] ADDRCONF(NETDEV\_UP): wlan0: link is not ready Feb 27 17:02:19 tabord laptop kernel: [14.499530] mtrr: no more MTRRs available Feb 27 17:02:19 tabord-laptop kernel: [ 14.499583] mtrr: no more MTRRs available Feb 27 17:02:20 tabord-laptop kernel: [ 15.470226] Blue tooth: BNEP (Ethernet Emulation) ver 1.3 Feb 27 17:02:20 tabord-laptop kernel: [15.470229] Bluetooth BNEP filters: protocol multicast Feb 27 17:02:20 tabord-laptop kernel: [15.475449] Bridge firewalling registered Feb 27 17:02:20 tabord-laptop kernel: [ 15.534876] ppdev: user-space parallel port driver Feb 2 17:02:22 tabord-laptop kernel: [17.317221] e1000e: eth0 NIC Link is Up 1000 Mbps Full Duplex, Flor Control: RX/TX Feb 27 17:02:22 tabord-laptop kernel: [17.317395] ADDRCONF(NETDEV\_CHANGE) eth0: link becomes ready Feb 27 17:02:26 tabord-laptop kernel: [ 21.242404] IBM TrackPoint firmwa 0x0e, buttons: 3/3 Feb 27 17:02:26 tabord-laptop kernel: [ 21.482140] input: TPPS/2 IBM TrackPoint as /devices/platform/i8042/serio1/serio2/input/input15 Feb 27 17:02:43 tabord-laptop kernel: [38.318873] ADDRCONF(NETDEV\_CHANGE): wlan0: link becomes ready Feb 27 17:02:43 tabord-lap top kernel: [ 38.318905] cfg80211: Calling CRDA for country: US Feb 27 17:02:43 tabord-laptop kernel [ 38.320698] cfg80211: Regulatory domain: US Feb 27 17:02:43 tabord-laptop kernel: [ 38.320700]

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(start\_freq - end\_freq @ bandwidth), (max\_antenna\_gain, max\_eirp) Feb 27 17:02:43 tabord-laptop ker nel: [ 38.320703] (5170000 KHz - 5250000 KHz @ 40000 KHz), (10000 mBi, 10000 mBm) Feb 27 17 02:43 tabord-laptop kernel: [ 38.320706] (5735000 KHz - 5835000 KHz @ 40000 KHz), (10000 mBi, 10000 mBm) Feb 27 17:02:43 tabord-laptop kernel: [ 38.320709] cfg80211: Regulatory domain: US Feb 27 17:02:43 tabord-laptop kernel: [38.320711] (start\_freq - end\_freq @ bandwidth), (max\_antenna\_gair max\_eirp) Feb 27 17:02:43 tabord-laptop kernel: [ 38.320713] (2402000 KHz - 2472000 KHz @ 40000 KHz), (300 mBi, 2700 mBm) Feb 27 17:02:43 tabord-laptop kernel: [38.320716] (517... dave945 (dave-dtabor) wrote on 2010-02-27: #1513 Download full text (34.6 KiB) After unplugging eth0, wlan0 runs for about a minute then quits. Here is the sequence of events: Feb 27 17:31:43 tabord-laptop kernel: [ 47.352057] wlan0: no IPv6 routers present Feb 27 17:31:50 tabordlaptop kernel: [ 54.364177] e1000e: eth0 NIC Link is Down Feb 27 17:31:50 tabord-laptop NetworkMar ager: <info> (eth0): carrier now OFF (device state 8, deferring action for 4 seconds) Feb 27 17:31:55 tabord-laptop NetworkManager: <info> (eth0): device state change: 8 -> 2 (reason 40) Feb 27 17:31:55 tabord-laptop NetworkManager: <info> (eth0): deactivating device (reason: 40). Feb 27 17:31:55 tabord laptop NetworkManager: <info> (eth0): canceled DHCP transaction, dhcp client pid 1794 Feb 27 17:β1[55 tabord-laptop NetworkManager: <WARN> check\_one\_route(): (eth0) error -34 returned from rtnl\_route\_del(): Sucess#012 Feb 27 17:31:55 tabord-laptop avahi-daemon[968]: Withdrawing addre record for 10.0.1.17 on eth0. Feb 27 17:31:55 tabord-laptop avahi-daemon[968]: Leaving mDNS multicast group on interface eth0.IPv4 with address 10.0.1.17. Feb 27 17:31:55 tabord-laptop avahi-daemon[968]: Interface eth0.IPv4 no longer relevant for mDNS. Feb 27 17:31:55 tabord-laptop NetworkManager: <into> Policy set 'Auto Tabor (5 GHz)' (wlan0) as default for routing and DNS. Feb 27 17:32:04 tabord-laptop

wpa\_supplicant[1356]: CTRL-EVENT-SCAN-RESULTS Feb 27 17:32:28 tabord-laptop anacron[2450]: Anacron 2.3 started on 2010-02-27 Feb 27 17:32:28 tabord-laptop anacron[2450]: Normal exit (0 jobs run) Feb 27 17:32:28 tabord-laptop kernel: [ 91.927340] CPU0 attaching NULL sched-domain. February 27 17:32:28 tabord-laptop kernel: [91.927344] CPU1 attaching NULL sched-domain. Feb 27 17:32:28 tabord-[aptop kernel: [ 91.934050] thinkpad\_acpi: EC reports that Thermal Table has changed Feb 27 17:32|2tabord-laptop kernel: [91.940567] CPU0 attaching sched-domain: Feb 27 17:32:28 tabord-laptop kernel: [91.940570] domain 0: span 0-1 level MC Feb 27 17:32:28 tabord-laptop kernel: [91.940572] groups: 🖗 1 Feb 27 17:32:28 tabord-laptop kernel: [ 91.940576] CPU1 attaching sched-domain: Feb 27 17:32:2 tabord-laptop kernel: [ 91.940577] domain 0: span 0-1 level MC Feb 27 17:32:28 tabord-laptop kernel [91.940579] groups: 1 0 Feb 27 17:32:44 tabord-laptop wpa\_supplicant[1356]: CTRL-EVENT-SCAN-RE SULTS Feb 27 17:32:44 tabord-laptop wpa\_supplicant[1356]: Trying to associate with 00:1f:f3:f8:a1:db (SSID='Tabor (5 GHz)' freq=5745 MHz) Feb 27 17:32:44 tabord-laptop NetworkManager: <info> (wland): supplicant connection state: completed -> associating Feb 27 17:32:44 tabord-laptop wpa\_supplicant[1356]: CTRL-EVENT-DISCONNECTED - Disconnect event - remove keys Feb 27 17:32:44 tabord laptop NetworkManager: <info> (wlan0): supplicant connection state: associating -> disconnected feb 27 17:32:44 tabord-laptop kernel: [107.648220] wlan0: deauthenticating from f8:1e:df:fa:e6:1c by local choice (reason=3) Feb 27 17:32:44 tabord-laptop kernel: [ 107.651297] wlan0: direct probe to AP 00:1f:f3:f8:a1:db (try 1) Feb 27 17:32:44 tabord-laptop kernel: [107.652818] wlan0: direct probe responded Feb 27 17:32:44 tabord-laptop kernel: [ 107.652825] wlan0: authenticate w...

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dave945 (dave-dtabor) wrote on 2010-02-28:		# 5 4
<u>Download full te</u> xt (44.9 KiB)		

This time, I booted to linux and it worked (don't know for how long it will last):

Feb 27 22:45:43 tabord-laptop kernel: [ 12.470749] iwlagn: Intel(R) Wireless WiFi Link AGN driver for Linux, 1.3.27ks Feb 27 22:45:43 tabord-laptop kernel: [12.470752] iwlagn: Copyright(c) 2003-2009 Intel Corporation Feb 27 22:45:43 tabord-laptop kernel: [ 12.470830] iwlagn 0000:03:00.0: PCI INT A -> GSI 17 (evel, low) -> IRQ 17 Feb 27 22:45:43 tabord-laptop kernel: [ 12.470906] iwlagn 0000:03:00.0: Detected Intel Wireless WiFi Link 5100AGN REV=0x54 Feb 27 22:45:43 tabord-laptop kernel: [12.513637] iwlagn 0000:03:00.0: Tunable channels: 13 802.11bg, 24 802.11a channels Feb 27 22:45:43 tabord-laptop kernel: [12.547322] input: HDA Intel Headphone as /devices/pci0000:00/0000:00:1b.0/sound/card0/input10 Feb 27 22:45:43 tabord-laptop kernel: [ 12.547382] input: HDA Intel Mic as /devices/pci0000:00/0000:00:1b.0/sound/card0/input11 Feb 27 22:45:43 tabord-laptop kernel: [ 12.547429] input: HDA Intel Mic as /devices/pci0000:00/0000:00:1b.0/sound/card0/input12 Feb 27 22:45:43 tabord-laptop kernel: [12.547473] input: HDA Intel Headphone as /devices/pci0000:00/0000:00:1b.0/sound/card0/input13 Feb 27 22:45:43 tabord-laptop kernel: [12.720221] pcmcia\_socket pcmcia\_socket0: cs: IO por probe 0x100-0x3af: clean. Feb 27 22:45:43 tabord-laptop kernel: [12.721953] pcmcia\_socket pcmcia\_socket0: cs: IO port probe 0x3e0-0x4ff: excluding 0x4d0-0x4d7 Feb 27 22:4 tabord-laptop kernel: [12.722685] pcmcia\_socket pcmcia\_socket0: cs: IO port probe 0x820-0x8ff: clean. Feb 27 22:45:43 tabord-laptop kernel: [ 12.723262] pcmcia\_socket pcmcia\_socket0: cs: IO port probe 0xc00-0xcf7: clean. Feb 27 22:45:43 tabord-laptop kernel: [12.723993] pcmcia\_socket pcmcia\_socket0: cs: IO port probe 0xa00-0xaff: clean. Feb 27 22:45:43 tabord-laptop ker nel: [ 12.816328] ADDRCONF(NETDEV\_UP): eth0: link is not ready Feb 27 22:45:43 tabord-laptop keinel: [ 12.817604] iwlagn 0000:03:00.0: firmware: requesting lbm-iwlwifi-5000-2.ucode Feb 27 22:45:43 tabordaptop firmware.sh[1074]: Cannot find firmware file 'lbm-iwlwifi-5000-2.ucode' Feb 27 22:45:43 tabold laptop kernel: [12.860701] iwlagn 0000:03:00.0: firmware: requesting lbm-iwlwifi-5000-1.ucode Feb 2: 22:45:43 tabord-laptop kernel: [ 12.934285] Synaptics Touchpad, model: 1, fw: 7.0, id: 0x1c0b1, cap 0xd04791/0xb00000 Feb 27 22:45:43 tabord-laptop kernel: [12.934290] serio: Synaptics pass-through port at isa0060/serio1/input0 Feb 27 22:45:43 tabord-laptop kernel: [ 12.949384] iwlagn 0000:03:00.0 loaded firmware version 8.24.2.12 Feb 27 22:45:43 tabord-laptop kernel: [ 13.000010] input: SynPS/2 \$ynaptics TouchPad as /devices/platform/i8042/serio1/input/input14 Feb 27 22:45:43 tabord-laptop kernel: [13.058703] usb 4-2: new full speed USB device using uhci\_hcd and address 3 Feb 27 22:45:43 tabord laptop kernel: [13.098558] Registered led device: iwl-phy0::radio Feb 27 22:45:43 tabord-laptop kernel [ 13.098574] Registered led device: iwl-phy0::assoc Feb 27 22:45:43 tabord-laptop kernel: [ 13.098588 Registered led device: iwl-phy0::RX Feb 27 22:45:43 tabord-laptop ke...

Chase Douglas (chasedouglas) wrote on 2010-03-01:		<u>#</u> 555	
@dave945			

There's something interesting in your logs. Both boot dmesg logs when the wireless wasn't working properly had loaded the iwlwifi-5000-2.ucode properly. When you installed the linux-backports-modules package it

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day. Thanks Dave

				_
started to look for lbm-iwlwifi-5000-2.ucode firmware file instead (note the prefixed "lbm-"). It then fell back to lbm-iwlwifi-5000-1.ucode, which it found. I am wondering if this is a firmware issue.				
By default you should have both iwlwifi-5000-1.ucode and iwlwifi-5000-2.ucode in /lib/firmware/. Assuming you do, try the following test:				
1. move /lib/firmware/iwlwifi-5000-2.ucode to /lib/firmware/iv	vlwif	i-5000-2.ucode.backup	o 2. restart	
If it gets better, do the opposite. Move the ucode file back to v the wireless behaves poorly again. Please post your results in			rt to confirr	n that
Thank you				
Changed in linux (Ubuntu):				
status :		$Triaged \rightarrow Incon$	mplete	
dave945 (dave-dtabor) wrote on 2010-03-02:			<u>#56</u>	
Chase, Thanks for the tip. I did as you suggested. I renamed to worked. Then I named it back and rebooted: no wlan0. Feeling back to .backup and rebooted thinking to write in and report a still not functioning, even though it appears to be OK as repor- could be hardware. or (b) if the driver could have messed up t	we posi ed b	were on to something, itive diagnosis. Unfortu y syslog. This makes r	l renamed Inately, wla ne wonder	the file` n0 is if (a) it

Windows Vista on this same laptop which has always connected before, stopped working to-

PS: let me know if you would like me to upload any logs. Oh, also, you mentioned lbm-prefixed drivers in your prev have:	ious note. I don't see	em to have any. here	's what i
tabord@tabord-laptop:/lib/firmware\$ ls -lart *iwlwifi* -rw 6000-4.ucode -rw-r-r- 1 root root 337400 2009-11-30 06 353240 2009-11-30 06:29 iwlwifi-5000-2.ucode.backup - wifi-5000-1.ucode -rwxr-xr-x 1 root root 187972 2009-11- 187608 2009-11-30 06:29 iwlwifi-4965-1.ucode -rwxr-xr-y 3945-2.ucode -rw-r-r- 1 root root 149652 2009-11-30 06 335056 2009-11-30 06:29 iwlwifi-1000-3.ucode tabord@ access lbm*: No such file or directory	:29 iwlwifi-5150-2.uc rw-rr 1 root root 3- 30 06:29 iwlwifi-496 < 1 root root 150100 :29 iwlwifi-3945-1.uc	ode -rw-rr 1 root r 45008 2009-11-30 00 5-2.ucode -rw-rr 1 2009-11-30 06:29 iw ode -rw-rr 1 root r	oot 5:29 iwl- root root /lwifi- root
Chase Douglas (chasedouglas) wrote on 2010-03-02:			# 5 7
@dave945:			
Please attach a dmesg log now. I'd like to see what's in t	he log now that wifi i	sn't working.	
Also, try running 'rfkill list'. Maybe something (perhaps w	indows?) set a block		

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			1
<u>dave945 (dave-dtabo</u> r) wrote on 2010-03-03:		# 5 8	
<ul> <li>dmesg Edit (64.0 KiB, text/plain)</li> <li>Chase, tabord@tabord-laptop:~\$ rfkill list 0: tpacpi_bluet</li> <li>blocked: no 1: phy0: Wireless LAN Soft blocked: no Hard</li> <li>no Hard blocked: no</li> </ul>			
Also, Vista wifi is working today. I will attach /var/log/dn	nesg		
Thanks, David			
Chase Douglas (chasedouglas) wrote on 2010-03-03:		# 5 9	
@dave945:	I		
Something odd is going on here. In the first dmesg when found and the following was output:	e things started to w	ork, the -2 firmware wasn'	ť
Feb 27 22:45:43 tabord-laptop kernel: [12.817604] iwlag 5000-2.ucode Feb 27 22:45:43 tabord-laptop firmware.sl 2.ucode' Feb 27 22:45:43 tabord-laptop kernel: [12.8607 lbm-iwlwifi-5000-1.ucode Feb 27 22:45:43 tabord-laptop firmware version 8.24.2.12	n[1074]: Cannot find [01] iwlagn 0000:03:0	firmware file 'lbm-iwlwifi-5 10.0: firmware: requesting	5000
However, in your last dmesg (where things are broken), v	ve see:		
[12.917423] iwlagn 0000:03:00.0: firmware: requesting l 0000:03:00.0: lbm-iwlwifi-5000-2.ucode firmware file req ware: requesting lbm-iwlwifi-5000-1.ucode [13.049180] 5000-1.ucode, which is deprecated. Please use API v2 in firmware version 8.24.2.12	failed: -2 [ 12.93834 wlagn 0000:03:00.0	1] iwlagn 0000:03:00.0 fir Loaded firmware lbm-wl	wifi-
Note that in this log we see it complain about how the -1 in both tests, we should see the message output in both between these tests? Did you update your kernel or linux	logs. Do you know it	the driver itself has char	
<u>dave945 (dave-dtabo</u> r) wrote on 2010-03-04:		# 6 0	
Chase, I haven't updated anything, but I see your point. S again? Thanks Dave	hould I install linux-b	ackports	
On 3/3/2010 9:41 AM, Chase Douglas wrot <u>e: [</u> ]			

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Chase Douglas (chasedouglas) wrote on 2010-03-04:			# 6 1
@dave945:			
I'm not really sure what the best way forward is now. You to see if anything works, and if you find anything be sure include some fixes that affect you. Some newer drivers o age available in the karmic pre-proposed ppa: https://lau	to let ús know. The l an be found in the li	'atest compat-wireles nux-backports-modu	ss tree may les pack-
However, your issues are a little beyond my experience. at http://linuxwireless.org/en/users/Documentation/Rep report a bug to the linux-wireless mailing list. If you repo to your message in a comment here.	orting_bugs to chec	к̃ some more variable	es and then
jsweiss (juliensweiss) wrote on 2010-03-05:			# 6 2
Hello,	•		
Tried all the firmware images, with the same result. Also supported.	tried ndiswrapper, b	ut it looks like this dr	iver is not
However, i tried a different thing i changed on the wifi from Encryption mode : WPA-PSK, WPA Encryption: TKIF this is the reason, but until now, everything looks good. I sion (8.24.2.12). III post back after I test it for more time (sometimes once or twice in 2, 3 days, other times twice based	to WPA2-PSK, Encry also changed the firi as the problem usua	ption AES. I don't kn mware to the latest v ally appears totally ra	ow if er- andom
for more details you can check the Huawei website. Not a wifi hotspot that was totally open, and it worked witho		or 3 days in a hotel w	hich had
JChase Douglas wrote: []_			
Chase Douglas (chasedouglas) wrote on 2010-03-05:			# 6 3

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@jsweiss:			
Thanks for that input. There are often issues with variou. something we should always keep in mind when we are brands they like, but I try to use Apple routers personally stable brand of routers I've ever used.	working on wireless i	issues. I'm sure others	have
Chase Douglas (chasedouglas) wrote on 2010-03-05:			# 2 4
@dave945:			
Can you try what jsweiss has tried? First, trying to use W if possible?	PA2-PSK using AES,	and then trying other r	outers
jsweiss (juliensweiss) wrote on 2010-03-05:			# 5 5
@Chase			TI

True, I really didn't think about the router issue until now. T chance to try it too much, because i just deleted it and inst have a 3G/WCDMA connection and so far the Huawei rout soon, which has the same features and as I understand, it	talled Linux I can ter makes sense. I v	not use an Apple rou vill switch to an Opti	uter, as i ion router			
If this change does not work, the next on the list is a Netge in the store and can take it back in 2 weeks if its not good) the WPA2-PSK - AES combination.						
l don't know if my issue is similar to Dave's issue, as for hi work at all For me it worked all the time, and died at ran			id not			
I will keep on testing, and keep everyone updated, this mig	ht not be a module,	/firmware issue afte	er all			
J	J					
Chase Douglas wrote: > @jsweiss: > > Thanks for that inpu nations > of wireless cards and routers. That's something working on wireless issues. I'm sure others have brands > because they seem > to be the most compatible and stabl	we should always k they like, but I try to	eep in > mind when use Apple routers p	we are			
jsweiss (juliensweiss) wrote on 2010-03-05:			# 6 6			
Chase:			$\top$			
			_			

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Also, when I had a DSL or Cable connection, the Linksys member the exact model, but it was a router with Gigabit one that did not crash when used at full speed (6Mbit DS	ethernet, suitable fo	, or gaming, and was the	
J			
Chase Douglas wrote: > @jsweiss: > > Thanks for that in nations > of wireless cards and routers. That's somethin working on wireless issues. I'm sure others have brands because they seem > to be the most compatible and sta	g we should always l > they like, but I try to	keep in > mind when we o use Apple routers per	e are
dave945 (dave-dtabor) wrote on 2010-03-11:		# <u>6</u> Z	
@Chase, I switched my Apple Airport Base station extrer and booted from Windows Vista into Ubuntu Karmic. Aft is working. If memory serves, this would work for a little to be working! So to summarize, if we set the router to th It's only in WPA "fallback mode" that the problem manife.	er unplugging the etl while and then go ba e highest level of se	h0 cable, the wlan0 cor ad. So far however, this	nection seems
13.852635] iwlagn: Intel(R) Wireless WiFi Link AGN drive right(c) 2003-2009 Intel Corporation [ 13.852702] iwlagn -> IRQ 17 [ 13.852710] iwlagn 0000:03:00.0: setting laten Detected Intel Wireless WiFi Link 5100AGN REV=0x54 [ 1 nels: 13 802.11bg, 24 802.11a channels [ 13.891959] allo kstat_irqs on node -1 [ 13.891979] iwlagn 0000:03:00.0: i rate control algorithm 'iwl-agn-rs' [ 13.902784] pcmcia_so 0x3af: clean. [ 13.907234] pcmcia_socket pcmcia_socket 0x4d0-0x4d7 [ 13.907930] pcmcia_socket pcmcia_socket clean. [ 13.908582] pcmcia_socket pcmcia_socket clean. [ 13.908582] pcmcia_socket pcmcia_socket clean. [ 13.908582] pcmcia_socket pcmcia_socket clean. [ 13.908582] pcmcia_socket pcmcia_socket0: cs: pcmcia_socket pcmcia_socket0: cs: 10 port probe 0xa00 model: 1, fw: 7.0, id: 0x1c0b1, caps: 0xd04791/0xb00000 at isa0060/serio1/input0 [ 14.019469] EXT4-fs (sda5): in SynPS/2 Synaptics TouchPad as /devices/platform/i804 0000:00:19.0: irq 31 for MSI/MSI-X [ 14.287750] e1000e ADDRCONF(NETDEV_UP): eth0: link is not ready [ 14.289 ing lbm-iwlwifif:5000-2.ucode [ 14.304014] iwlagn 0000:00 failed: -2 [ 14.304018] iwlagn 0000:03:00.0: firmware: rec iwlagn 0000:03:00.0: Loaded firmware lbm-iwlwifi-5000- instead. [ 14.329997] iwlagn 0000:03:00.0: loaded firmware	0000:03:00.0: PCI IN cy timer to 64 [13.8 '3.891900] iwlagn 00 oc irq_desc for 33 on rq 33 for MSI/MSI-X ocket pcmcia_socke t0: cs: I0 port probe t0: cs: I0 port probe t0: ocs: I0 port probe 00 port probe 0xc00- -0xaff: clean. [14.01 0] [14.011014] serio: ternal journal on sda '2/serio1/input/input 0000:00:19.0: irq 31 '348] iwlagn 0000:03 '3:00.0: Ibm-iwlwiff- juesting Ibm-iwlwiff- 1.ucode, which is dej are version 8.24.2.12	NT A -> GSI 17 (level, lo 52733] iwlagn 0000:03 000:03:00.0: Tunable ch node -1 [ 13.891961] a [ 13.898444] phy0: Sel t0: cs: I0 port probe 0x 0x3e0-0x4ff: excluding 0x820-0x8ff: 0xcf7: clean. [ 13.9092 1004] Synaptics Touch Synaptics pass-throug 15:8 [ 14.052474] input: t14 [ 14.228774] e1000 for MSI/MSI-X [ 14.287 3:00.0: firmware: reques 000-2.ucode firmware f 5000-1.ucode [ 14.3299 precated. Please use A	v) 00.0: an- lloc ected 100- 77] pad, n port e 979] ite req 979] ite req 98]
I'm going to re-instate the Ibm-iwlwifi-5000-2.ucode firmv	vare driver and see v	vhat happens	
Dave			

Chase Douglas wrote: > @dave945: > > Can you try what jsweiss has tried? First, trying to use WPA2-

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PSK using > AES, and then trying other routers if possible	9? > >		
jsweiss (juliensweiss) wrote on 2010-03-11:		# <u>6</u> 9	
Hello, Now testing with a Belkin wifi router, everything se	ems ok. Security is o	pen.	
jsweiss (juliensweiss) wrote on 2010-04-05:		# 7 0	
Hello, After extensive testing with various WiFi routers, I the others, but I am sure that my problem was a wrong c don't know if this happens only on Linux or also on Wind for long, and the problem showed up at random times. T On 03/05/2010 01:19 PM, Chase Douglas wrote: > @dav	ombination of router ows, as I did not get : hanks everyone for ti e945: > > Can you try	and security settings. to test the windows be he advice. v what jsweiss has tried	Me ti havio
First, trying to use WPA2-PSK using > AES, and then tryin	g other routers if pos	ssible? > >	
Scott Moser (smoser) wrote on 2010-04-14:		# 7 2	
@Chase, I had previously seen this from time to time on while I was away from the machine, someone had to relo wrt router (linksys wlan-54G). If you need anything, feel f	ad modules for me.	l use WEP auth, dd-	lay
Jeremy Foshee (jeremyfoshee) wrote on 2010-06-14:		## 7 3	
This bug report was marked as Incomplete and has not I As a result this bug is being closed. Please reopen if this lease http://www.ubuntu.com/getubuntu/download . Als mation that may have been missing. To reopen the bug, and change the status back to "New". Thank you.	is still an issue in th o, please be sure to i	e current Ubuntu re- provide any requested .	infor-
[This is an automated message. Apologies if it has reach message indicating so.]	ned you inappropriate	ely? please just reply to	this
tags : added: kj-expired Changed in linux (Ubuntu): sta- here:			

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The following references were found for the nickname "giulonline":

- 2015: Sending messages to the Forum "avocatnet.ro" in order to search for information ries for the expansion in the form of a business of the animal farm that the questioner has in his possession.

- 2017: Display of the nickname on the sites wex.nz and btceclub.ru – unspecified contentmenu The following references were found for the nickname "juliensweiss":

- 2006: Posting on the "MovieChat" Forum about movie music compilations.

 2008: Sending messages to the "linuxquestions.org" Forum about solving problems of server connectivity on the internet through the CentOS version 4.6.

- 2010: Registration of electronic program errors (bugs) on the platform "bugs.launchpad.net" on Linux – Ubuntu OS and extensive discussion with other users about solving online and offline connectivity issues correct operation of drivers.

# 4. What is and how does identity theft happen online?

<u>Definition</u>: Identity theft and identity fraud are catch-all terms the types of crimes in which someone illegally receives and uses personal

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another person's data in some way that involves fraud or deception, usually for economic benefit.

<u>Ways of online identity theft: There are</u> various techniques of online identity theft identity which are directly related to the degree of technical knowledge of the internet safety of both the user and the perpetrator.

Such techniques may have little to no technical background but in others cases to make the most of available technology.

## Indicative common methods:

Phishing: The perpetrator sends the user - victim a deceptive message email or text or social media message that contains links that can be used to download malicious software. This software may mine personal data from your computer information and send it without the victim's knowledge to a remote computer operated by the perpetrator. In other cases the above links they lead to virtual websites that resemble legitimate ones and deceive the user to lead him to voluntarily enter personal information, as it has the impression that it is registering them on legitimate websites (eg a banking institution).
Wi-Fi Hacking: Some public wireless network (Wi-Fi) connections may are not encrypted and this may allow an attacker to spy on and intercept data that a user sends or receives on his computer. A common practice requires perpetrators to create fake public connection points (Wi-Fi hotspots) with names that look like these of a legitimate network. **OPINION – TECHNICAL REPORT NIKOS VASILAKOS page 35 of 57** 

5. Any other observation in the field of your competence deemed useful for the case

Searching for domain names:

#### 1. Related domain names:

Source: indictment domain name: "secure.net.im"

Secure.net.im dawismultiservice.com Dhplus.com pkiplus.net

#### 2.Date of last domain DNS changes:

Source: https://whoisrequest.com/history/

Dhplus.com 30 Aug, 2021 Pkiplus.net 30 Aug, 2021 dawismultiservice.com Mar 18, 2014

Source: https://dnshistory.org/historical-dns-records/soa/secure.net.im

Secure.net.im 2021-04-25 -> 2021-06-25 2021-07-20 -> 2021-09-26

#### 3. Associated ip addresses :

Central Source : Related domain names. Source: https://www.robtex.com/ip-lookup/

Source: https://www.robtex.com/dns-lookup/secure.net.im

82.221.131.22 Iceland dhplus.com secure.net.im ns1.pkiplus.net

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82.221.131.23 Iceland dawismultiservice.com

82.221.131.31 Iceland mail.secure.net.im

182.237.0.79 Hong Kong dns1.secure.net.im

182.237.0.80 Hong Kong mx.dawismultiservice.com ns2.pkiplus.net mail.secure.net.im

37,228,129,228 Seychelles is1.dhplus.com ns2.pkiplus.net

37.228,129,229 Seychelles ns1.pkiplus.net

37,228,129,230 Seychelles dawismultiservice.com

82.103.128.249 Denmark Ns3.pkiplus.net

209.200.231.56 United States Ns3.pkiplus.net

#### Method

The domain name safe net im was searched for and from there it was associated and investigated each IP address and domain name.

#### The search was made in:

google.com, robtex.com, dnshistory.org and whoisrequest.com and all information on these the report is public information.

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5.1 What is the captcha, which is in the process, why is it not overcome? What is CAPTCHA? CAPTCHA (Completely Automated Public Turing test to tell Computers and Humans Apart) is a mechanism used on websites on the internet usually when registration process of a user and allows the system to decide whether the registration it is done by a human or an automated system (computer). Classic type CAPTCHAs were invented in 1997 and are still in use on some websites to this day, they ask users to identify a series distorted letters. The letters are distorted so bots don't they can recognize them. To pass the test, users must interpret the garbled text, to type the correct letters into a form field and submit the form. If the letters do not match, users are prompted to try again. Such CAPTCHAs are common in login forms, registration forms account, online polls and e-checkout pages trade. Match the characters in the picture As a protection against automated spam, you'll need To continue, type the characters you see in the picture. Why to type in the words that appear in this image to • register an account 101 (What is this?) D 0 sepalbeam

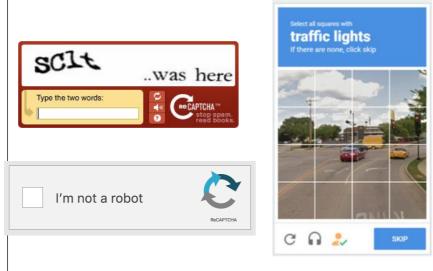
Indicative CAPTCHA examples

Characters:

Continue

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reCAPTCHA is more advanced than standard CAPTCHA tests. Unlike the normal ones CAPTCHA, reCAPTCHA sources the text from real-world images: street address images, text from printed books, text from old newspapers etc.



Sample reCAPTCHA formats

reCAPTCHA also takes into account the movement of the user's cursor (mouse) as well this is approaching the checkbox. Even the most immediate movement by a human being has some randomness at the microscopic level: tiny unconscious movements that the robots cannot be easily imitated. reCAPTCHA can also evaluate the cookies and history stored by her browser device to determine if the user is likely to be a bot.

If the test still cannot determine whether the user is human or not,

may present an additional challenge such as the image recognition test. The most

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modern forms of CAPTCHA, in combination with the above, also evaluate the general one user's online behavior.

CAPTCHA Violation

There are three main categories of CAPTCHA breaking techniques:

The purchase and use of online bulk CAPTCHA solving services which they take advantage of low-cost human resources in developing countries and they create so-called "Click Farms" where a large number of workers is paid to manually click the required CAPTCHA tests. - Exploiting developer errors when installing CAPTCHA on each application it is called upon to protect. - The use of advanced artificial intelligence (AI) with "smart" programs that can "imitate" a person's way of thinking and functioning. The first successful demonstration of automated CAPTCHA solving took place in 2018 at the ACM CCS show. Earlier than this time, the necessary technology did not exist with significant rates successful resolution. 5.2 The process requires a mobile phone for each return. It becomes someone to get US mobile number online; It is possible to get US mobile number online through various companies provide this service. These numbers are called "virtual phone numbers" and are available in specific countries depending on the respective provider. Basis of applicable law however, in order for a user to enter into a contract with one such company, should provide at least scanned copy of passport

or national identity card and documents proving the place of residence of the user in question.

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Indicative area code footprint map of the US

For example, a resident of Manhattan, New York will receive a cell phone number with local code "212" etc.

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A device fingerprint, machine fingerprint, or fingerprint A browser footprint is information collected about a computer for the purpose of its identification. This means that when a user connects to the Internet, the device it uses delivers a bundle of specific data on the download server about the websites you visit.

Browser fingerprinting is a powerful method that websites use to collect information about type and version of the browser, as well as the operating system, the active ones plugins, time zone, language, screen resolution and various other active settings.

Websites use the information that browsers provide for identifying unique users and tracking online behavior; their. This process is therefore called "program fingerprinting browsing".

In the case under consideration, the use of 200,000 different fingerprints is mentioned of device footprints, i.e. 200000 different ones would need to be used devices in order to have these elements and such a large number is extremely difficult to create artificially, without actually existing corresponding physical machines. (...)

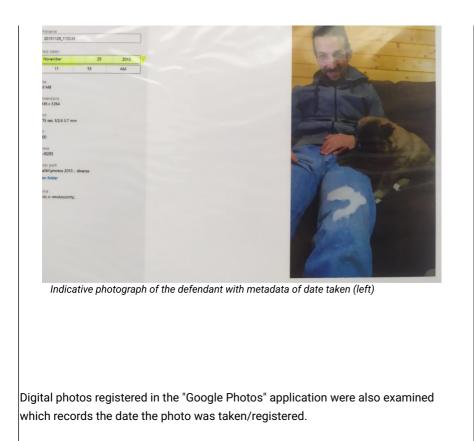
# 5.4 Can the defendant's affiliation be confirmed? Are there any digital traces of the defendant's whereabouts at the time?

Series of photographs examined depict the defendant in Romania. Specifically, the metadata of the digital photos were examined. Metadata is a series of data stored within the digital file

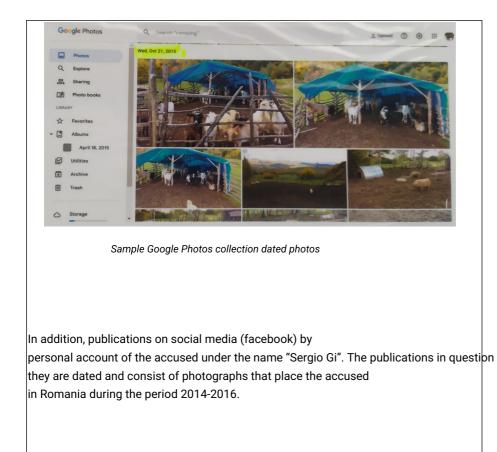
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photo and may contain, among other things, information about its time receiving it. The metadata of the digital photographs examined places the accused in Romania during the period 2014 -2016.

in line



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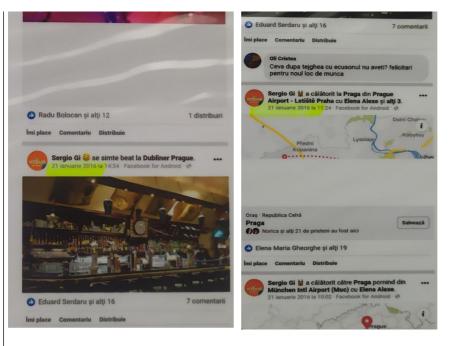


Indicative photo of a dated facebook post from the "Sergio Gi" account

In addition, publications were identified where the defendant has allowed the application of facebook to record its location footprint through the use of GPS and display map showing its location at the time of publication. The location places him in Prague on 21 January 2016.

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Indicative posts with location tagging

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# 5.5 Does the defendant have devices?

No, just a mobile phone with which the photos were taken in Romania, photos and dates on the drive.

## 5.6 What is the botnet cluster being accused of?

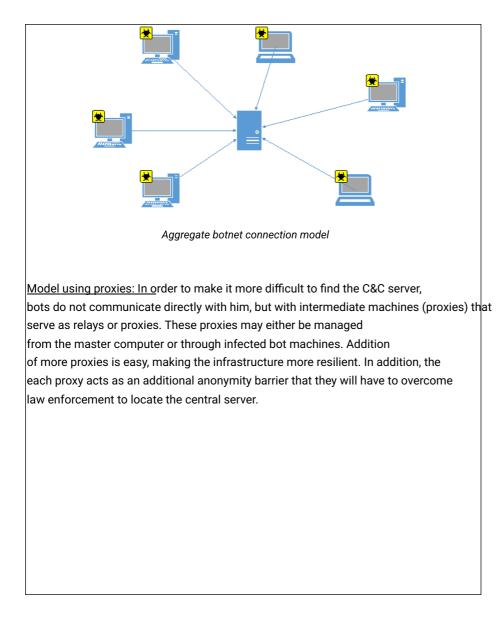
A botnet cluster or simply botnet ("bot network") is a network of computers that have infected by malware (bots) under the control of a single attacking party, known as a bot-herder. A bot is a piece of malware software that receives commands from a central computer (master) and once executed, it gives the bot-header the same access to the computer's resources as the real one its owner. Therefore bots can read and write files, execute programs, block keys, access camera, send email etc.

For this purpose, bots connect to Command and Control (C&C or CC). There are various models of botnets.

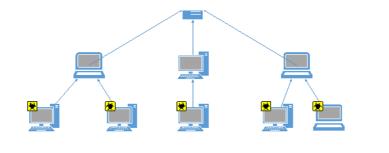
Aggregate Model: This model is the oldest and simplest. Bots give

report periodically to a central server (server). Their disadvantage is that if it stops, to have the main server running, the bots are rendered useless. Also the use of a single server makes the botnet easier for law enforcement to detect.

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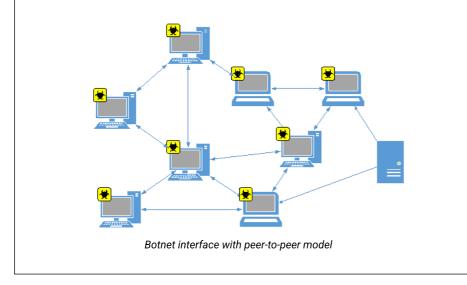


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Botnet me interface using proxies

<u>Peer-to-peer model: I</u>t is the most sophisticated type of botnet architecture. Here the bots they communicate with each other and not with the C&C server. Information and commands control are propagated in the network from bot to bot. To maintain control of the botnet, the master it only needs to be able to communicate with any infected machine. This makes taking down the entire botnet very difficult.



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The scale of a botnet (many consist of millions of bots) allows an attacker to performs large-scale actions. Since botnets remain under the control of a remote attacker, bots can receive updates and change the their behavior immediately. Common botnet actions include: - Spam e-mail: although e-mail considered today as an older form of attack, spam botnets are some of the larger in scope. They are mainly used for spamming, which often include malware. The Cutwail botnet, for example, can to send up to 74 billion messages per day. They are also used for bot propagation to recruit more computers into the botnet. - DDoS attacks: leverage the massive scale of the botnet to overload a network or target server, making it inaccessible to users. DDoS attacks are targeted organizations for personal or political incentives or for ransom in exchange for its termination attack. - Financial hacking: include botnets specifically designed for direct theft funds from businesses and credit card information. The finances

botnets, such as the ZeuS botnet, are responsible for attacks through which millions dollars were stolen directly from multiple businesses in very short periods of time periods.

- Targeted intrusions: smaller botnets designed to specifically compromise high-value organization systems from which attackers can penetrate and to further invade the network. These intrusions are extremely dangerous for them organizations, as attackers specifically target their valuable assets; including financial data, research and development, the intellectual property and personal customer information.

6. What technical skills and knowledge does the cluster or botnet need?

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To create a cluster/botnet one should have considerable technical computer knowledge above the average user.

- He should know techniques to disguise his online identity on the internet (e.g. by using sophisticated VPN services that offer significantly increased secrecy than average).

-He should find a reliable "host" to host the software that will control the botnet ( either by hacking consecutive users or by paying companies with low oversight of it hosting content or in collaboration with "hosts" who offer pure hosting to illegal activities for large amounts and are only available in "underground" channels communication that the average user does not have access to).

- For secure communication with the "host" you need a sufficient number of domain names which allow DNS service control and true location masking techniques

of the servers used (e.g. "fast flux" type)

- He should know how to handle the software he will handle and create

the botnet that will either be bought or found with "cracked" passwords from channels of questionable legitimacy.

- He should know ways (eg phishing) to gain illegal access to

PCs that will be used to build the botnet without being noticed.

In addition, it should be noted that for the organization and execution of an attack against the US IRS system, requires the creation and management of a large botnet range with sophisticated systems to avoid detection by law enforcement authorities. Those actions require not only increased expertise but also action through illegality organized cybercrime rings with strong internet connections "underworld" and access to capital to finance or finance services mediation, acquisition of required technical equipment, etc.

## **CONCLUSION - END**

Internet research of the pseudonyms listed in the case file does not prove some involvement in illegal actions and the findings point to either conversations with other users for entertainment or to solve technical problems of their PC said user with the internet (connectivity, server operation, etc.) by use Linux operating systems.

No sign or trace associated with illegal internet was observed activities or an indication that the defendant possesses the necessary increased expertise create or operate a highly sophisticated botnet and perform illegal actions as described in the case file.

Messages about farm work don't show any effort obtaining information on the procedures of corporate and tax legislation of USA.

There is evidence placing the accused in Romania at critical time period 2014 – 2016 as well as in Prague on January 21, 2016.

Devices and a wanted technician were not found in his possession at the time of his arrest equipment that links him to illegal activities or proves increased computer skills.

There is no evidence of a physical presence or connection to the US and his movements accused is said to be exclusively within Europe.

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Appendix 1

Curriculum vitae 1. Nikolaos Vasilakos

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