David and Goliath Estonia & Grand Strategy in Cyberspace Kenneth Geers

5.5

Kenneth Geers PhD, CISSP

Comodo Chief Research Scientist NATO Cyber Centre Ambassador Atlantic Council Senior Fellow Professor: Ukraine 20 yrs USG: US Army, NSA, NCIS, NATO Publications

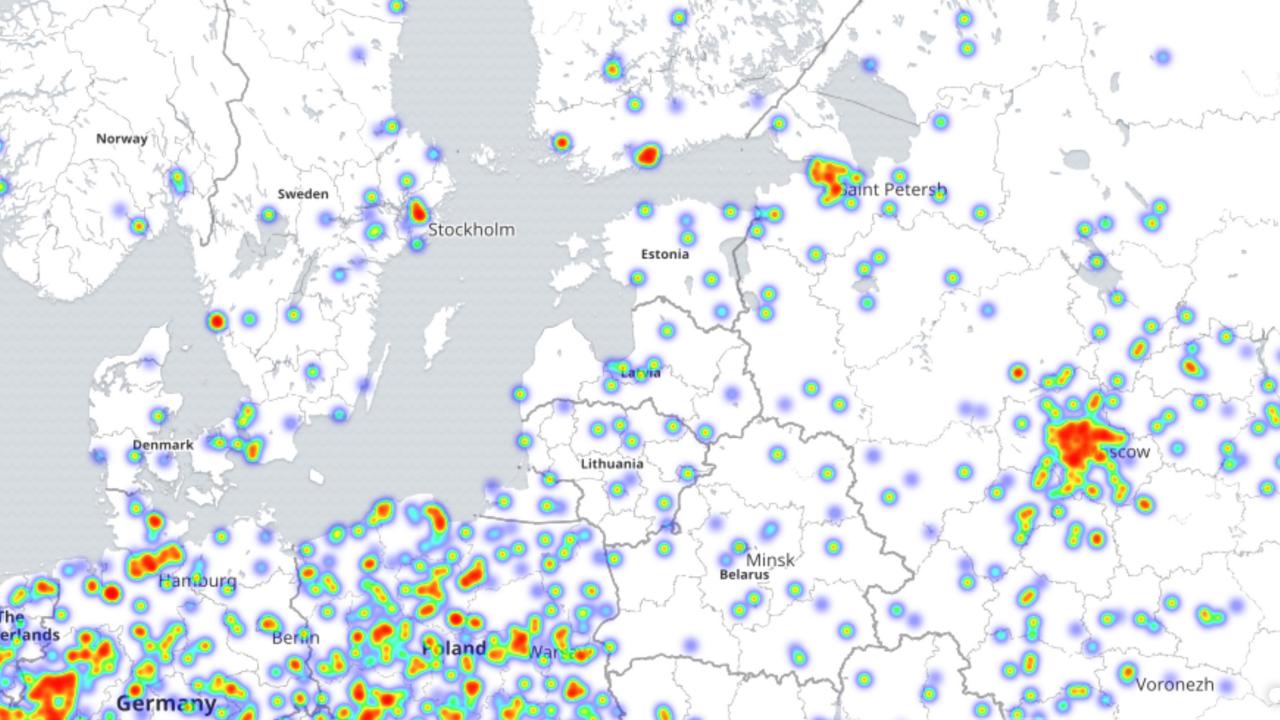
- Understanding Cyber Conflict
- Cyber War in Perspective
- Tallinn Manual
- Strategic Cyber Security
- The Virtual Battlefield

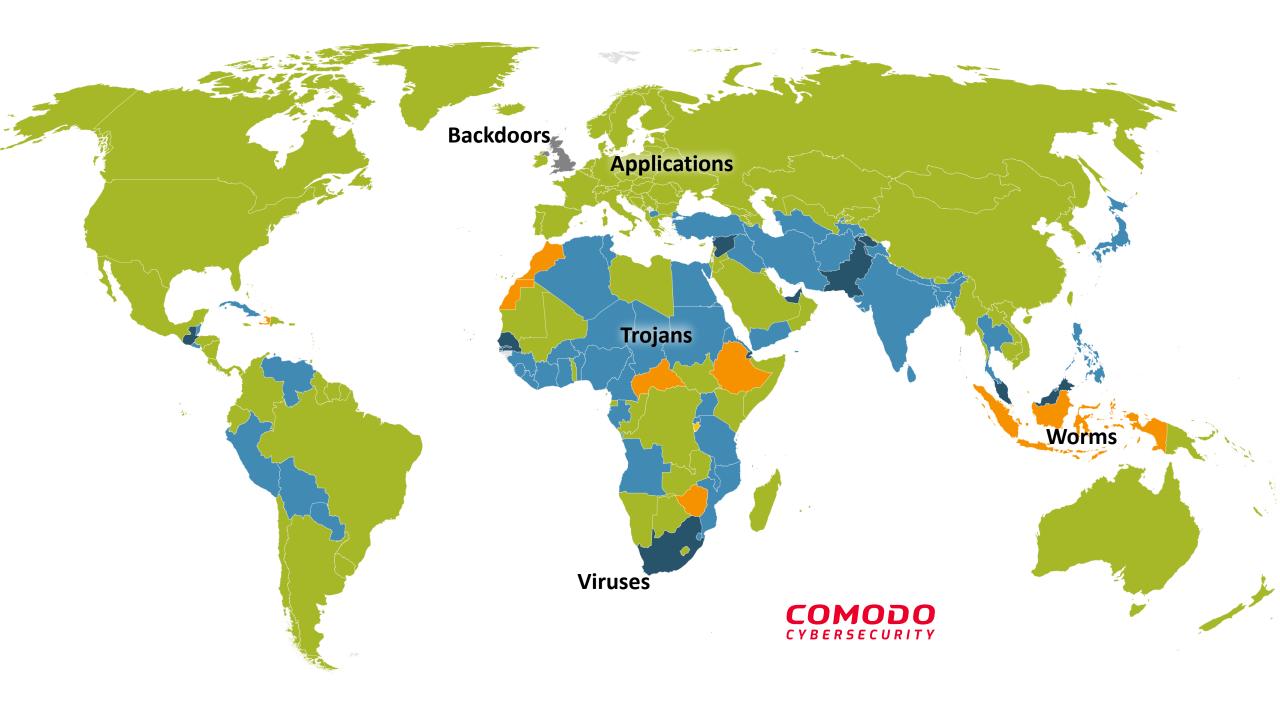
kenneth.geers@comodo.com @KennethGeers







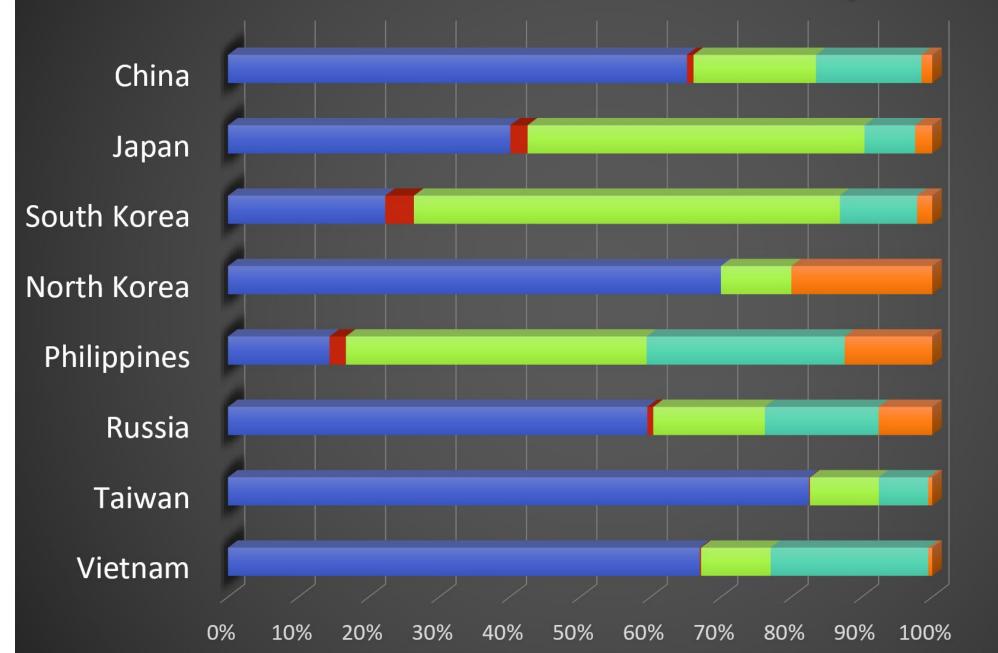




Top Malware Types by Country

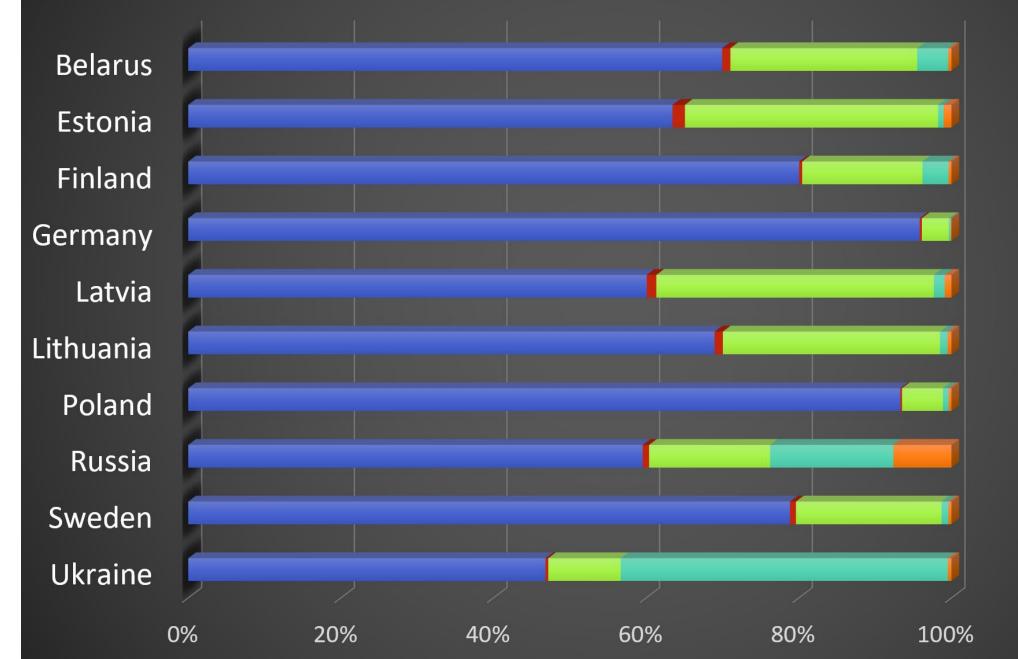


Malware Ratios: Around Japan



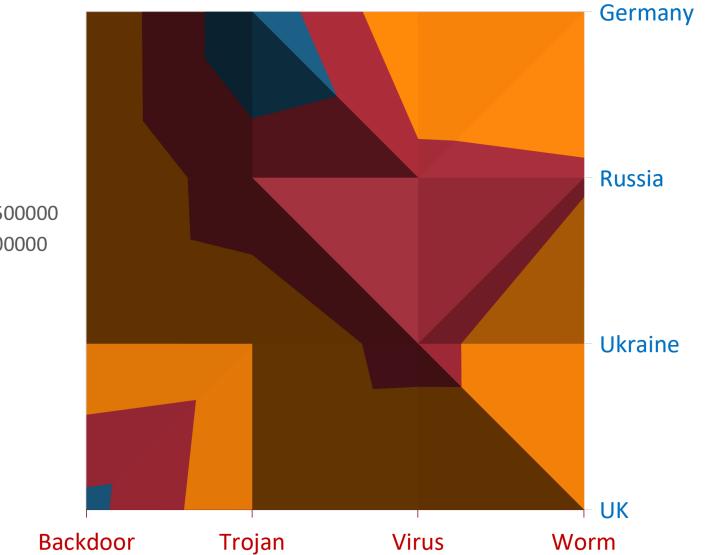


Malware Ratios: Around Estonia

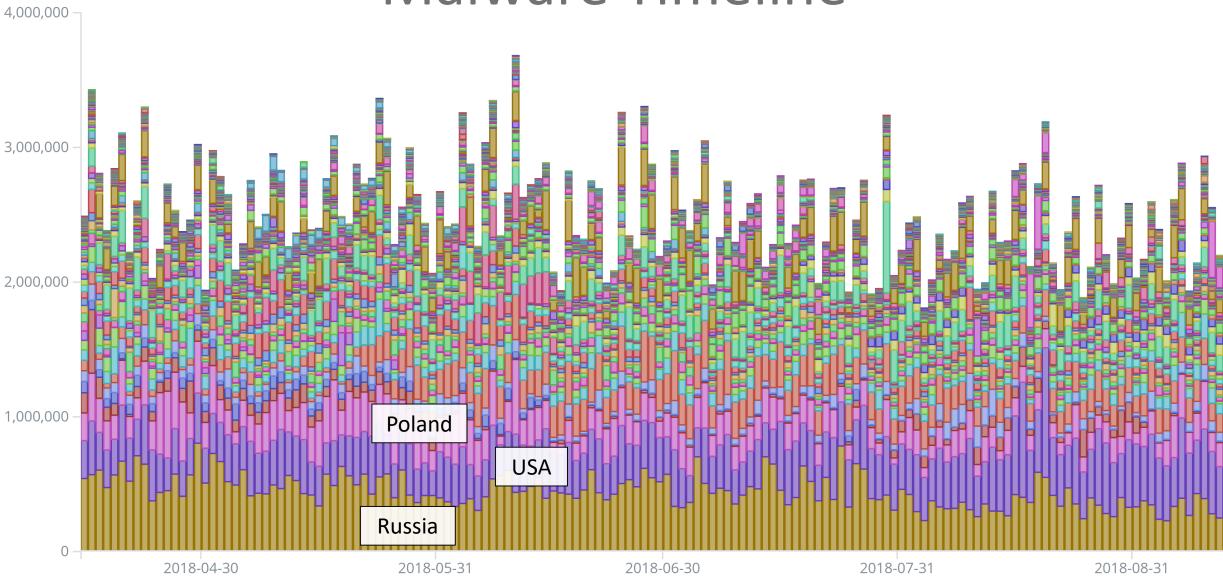


Application
Backdoor
Trojan
Virus
Worm

Malware Geography: Europe

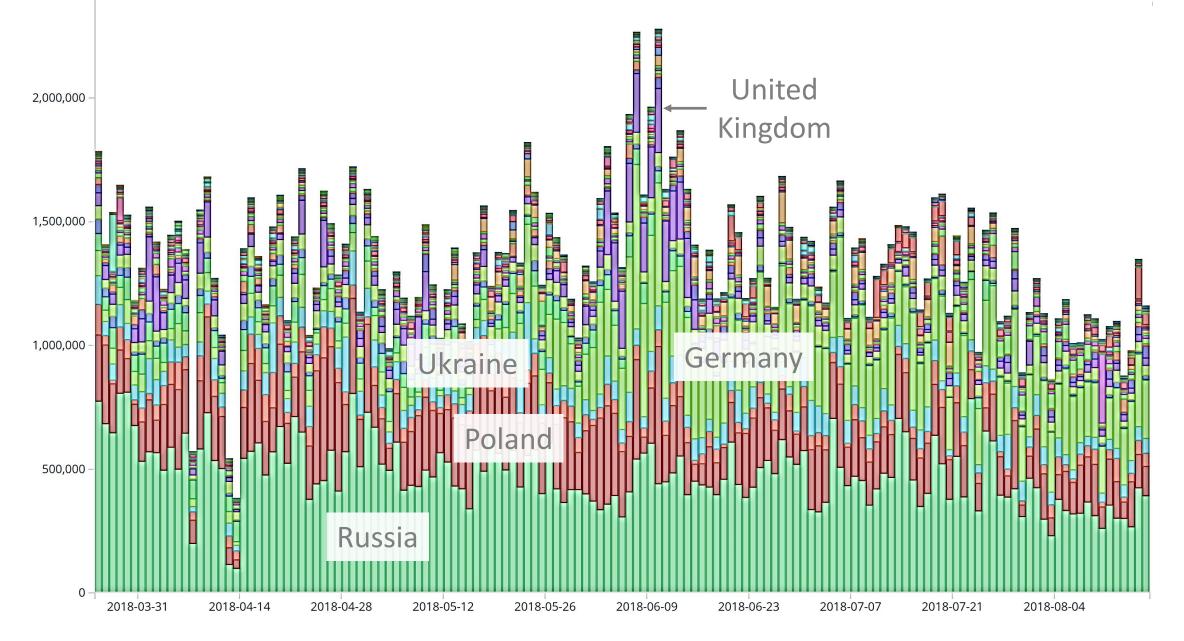


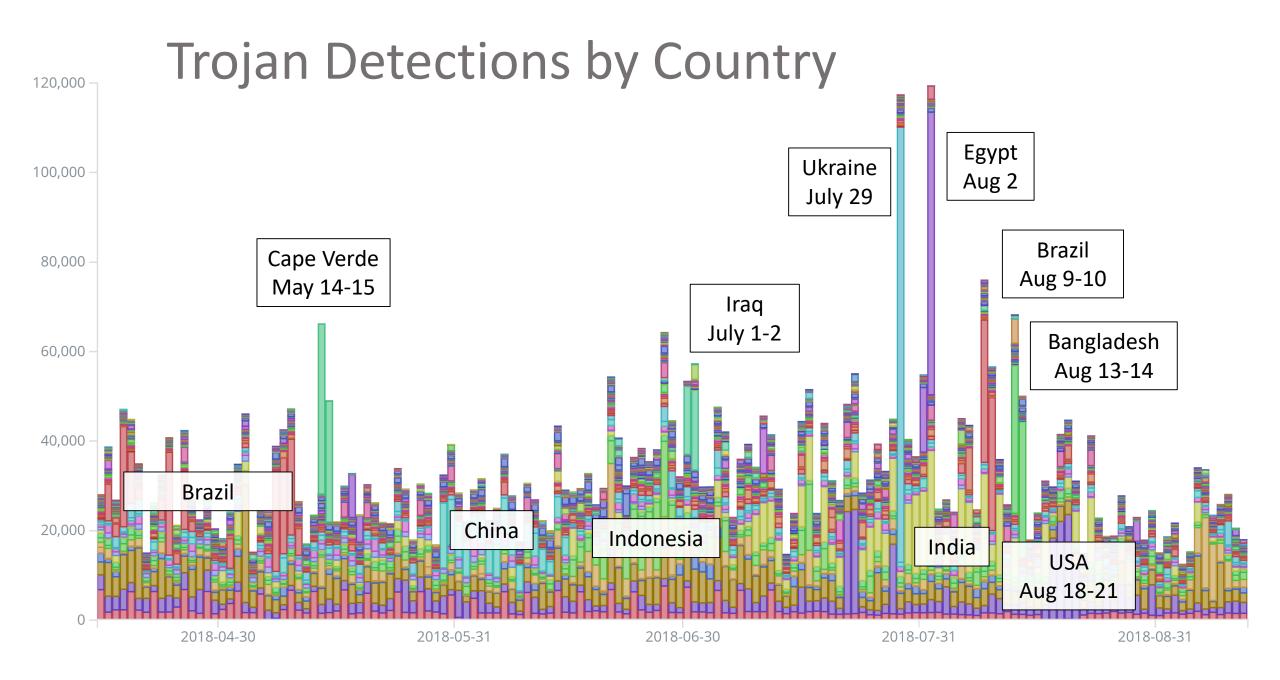
100000-1500000
500000-1000000
0-500000

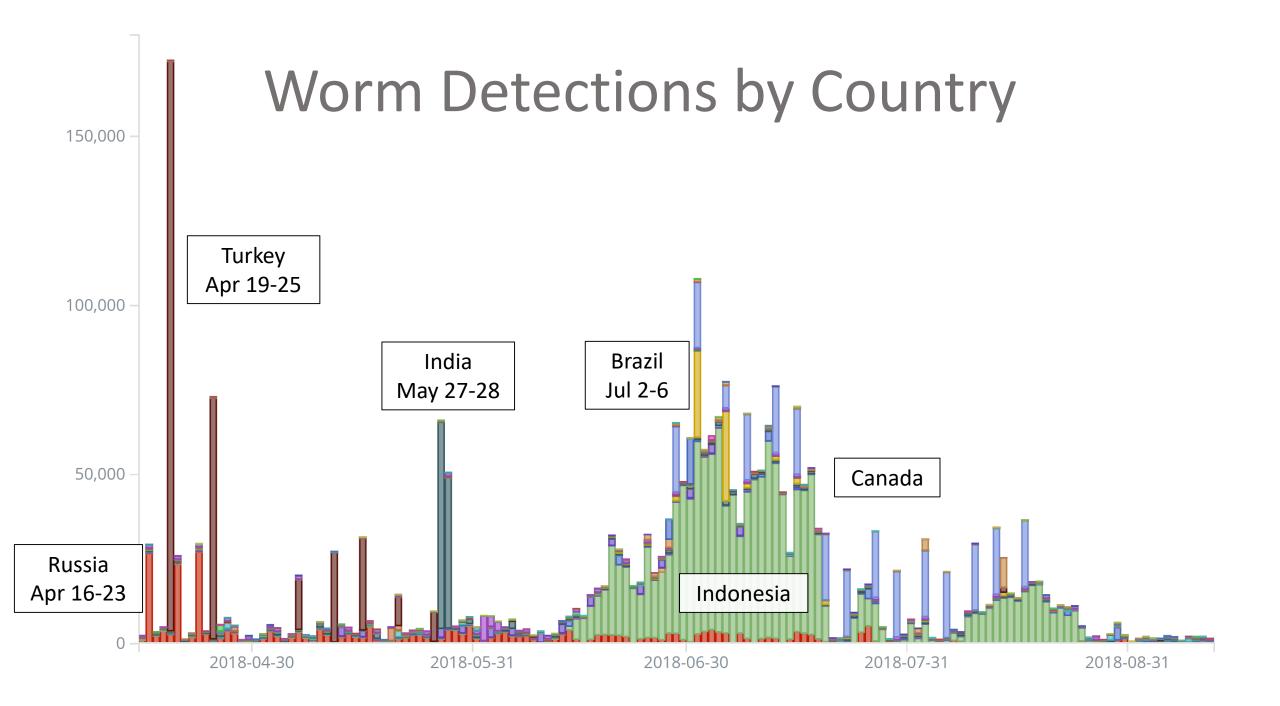


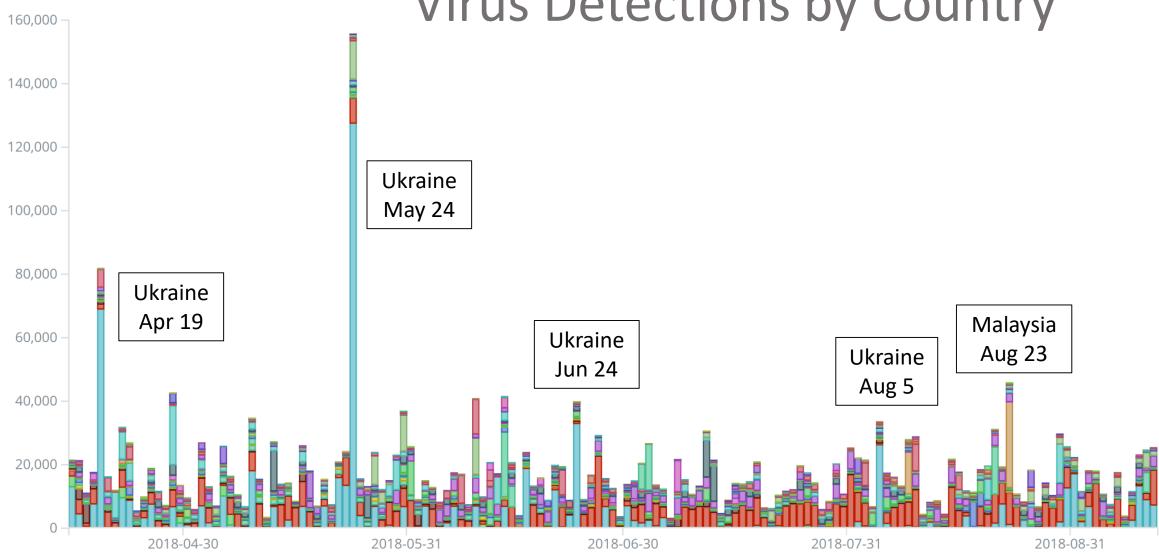
Malware Timeline

Malware Detection Timeline: Europe

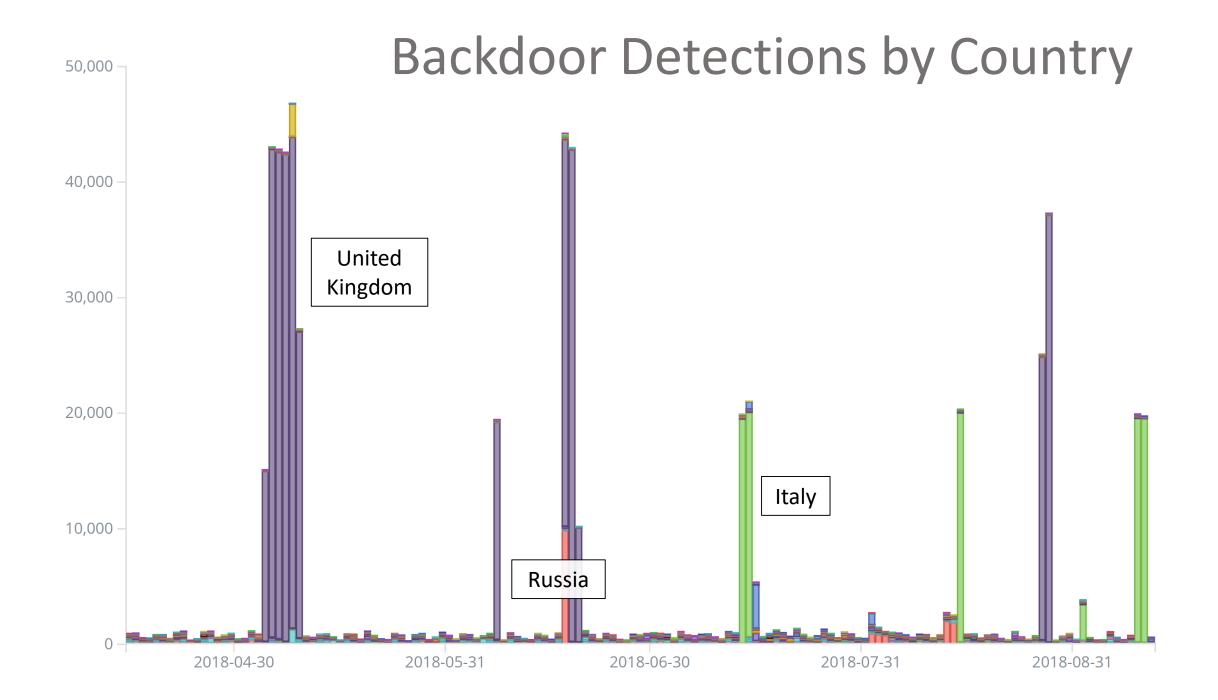




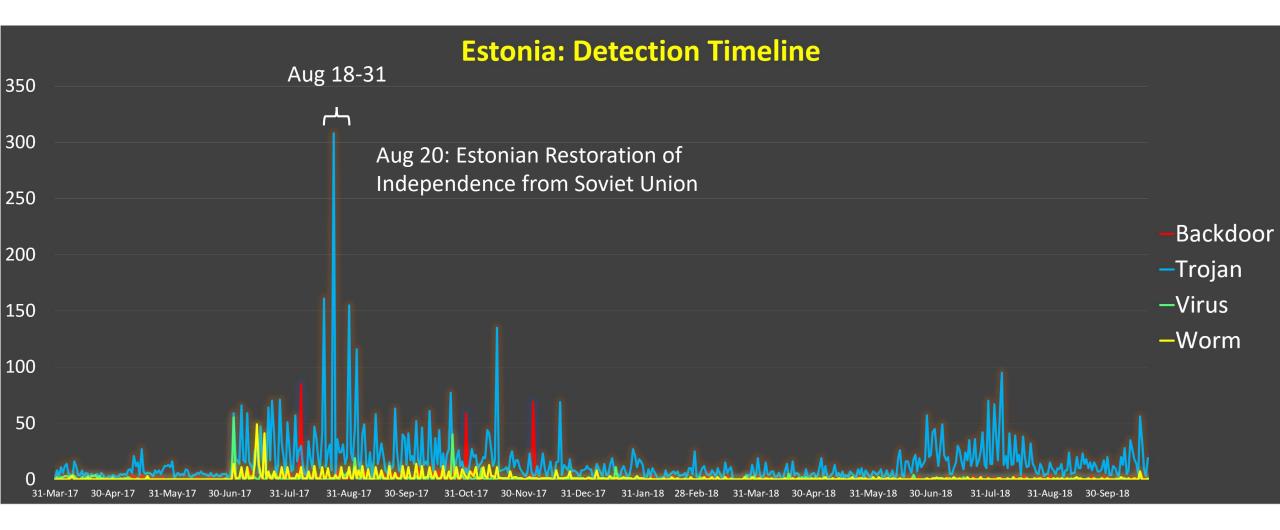




Virus Detections by Country



25000	Aug 30	Japan: Detection Timeline	
20000		July 28 & Aug 29: North Korea	
15000	July 15	launches missiles at/over Japan	—Backdoor —Trojan
10000			–Virus –Worm
5000			
0 32. ^{Natil} 30. ^{Aptil} 31. ^{Natil} 30. ¹⁰⁵	1. ¹¹ 31. ^{111.11} 31. ^{AUE 11} 30.5eP	$\frac{1}{310^{ct_11}} 30^{N0^{v_11}} 31^{10^{ct_11}} 31^{10^{ct_110}} 2^{5t_10^{v_10}} 31^{N0^{t_110}} 30^{N0^{t_110}} 31^{10^{v_110}} 30^{10^{v_110}} 31^{10^{v_110}} 31^{10^{v_110}} 30^{5t_10^{v_110}} 30^{5t_10^{v_110}} 30^{5t_10^{v_110}} 30^{5t_10^{v_110}} 31^{10^{v_110}} 31^{10^{v_110$	





March

13

Viruses

20,000

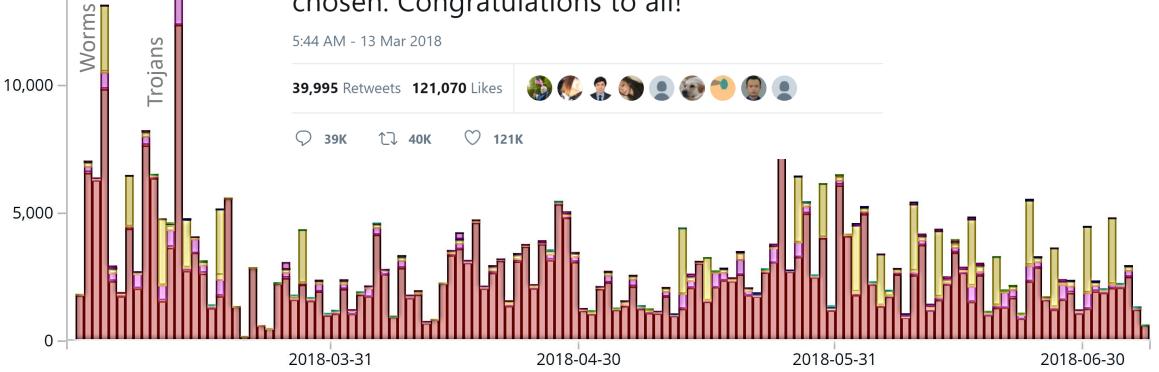
15,000

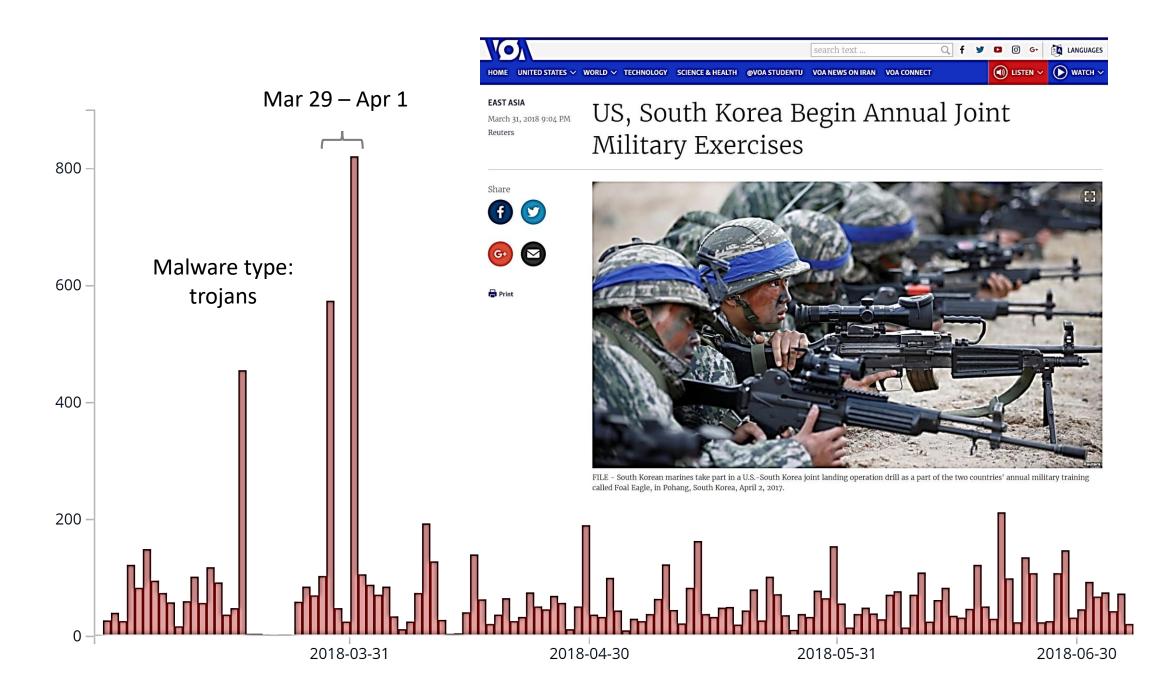


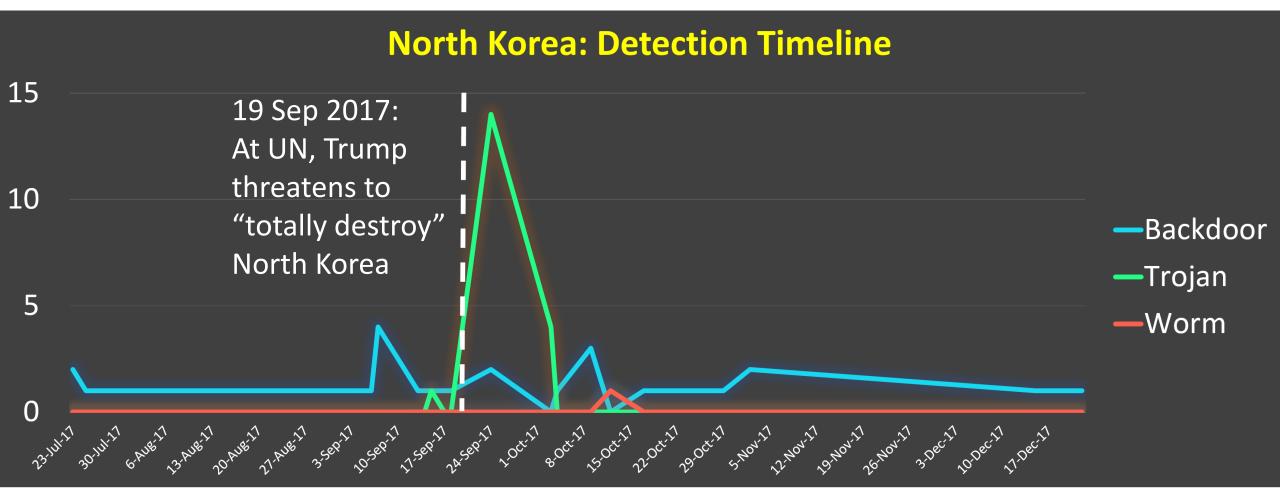
 \sim

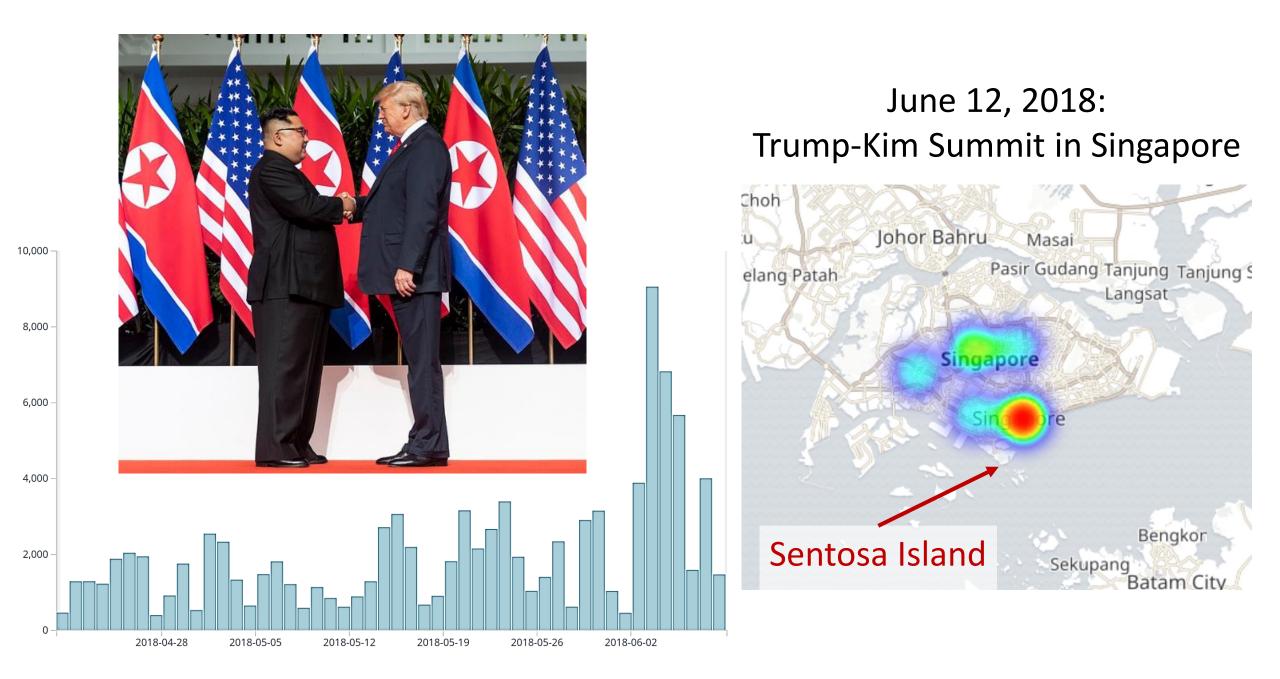
Mike Pompeo, Director of the CIA, will become our new Secretary of State. He will do a fantastic job! Thank you to Rex Tillerson for his service! Gina Haspel will become the new Director of the CIA, and the first woman so chosen. Congratulations to all!

5:44 AM - 13 Mar 2018









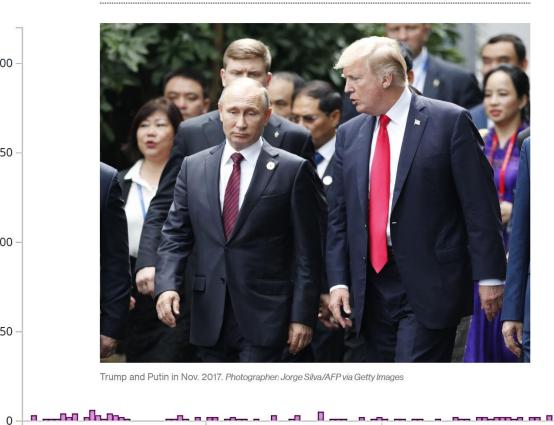
Bloomberg

Trump Plans July Meeting With Vladimir Putin

By Jennifer Jacobs, Margaret Talev, and Toluse Olorunnipa June 20, 2018, 7:18 PM EDT Updated on June 21, 2018, 2:21 PM EDT

2018-03-31

- ▶ Possibilities: Before NATO summit or after Trump's U.K. visit
- ▶ Trump wants Russia to be restored to international community



2018-04-30

2018-05-31

Vantaa likely to host Trump-Putin summit - Helsinki mayor

Virus

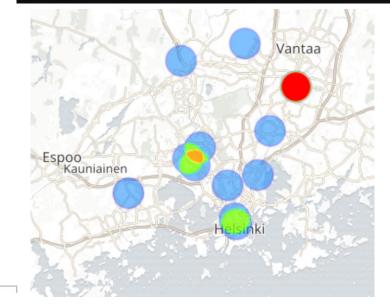
Detections

June 20-21

2018-06-30



he highly anticipated meeting between the presidents of the United States and Russia, Donald Trump and Vladimir Putin is likely to e held in the city of Vantaa, a part of the inner core of the Finnish Capital Region, the mayor of Helsinki Jan Vapaavuori said on "With high probability, the summit will take place in Vantaa," Vapaavuori told the Helsingin Sanomat newspaper

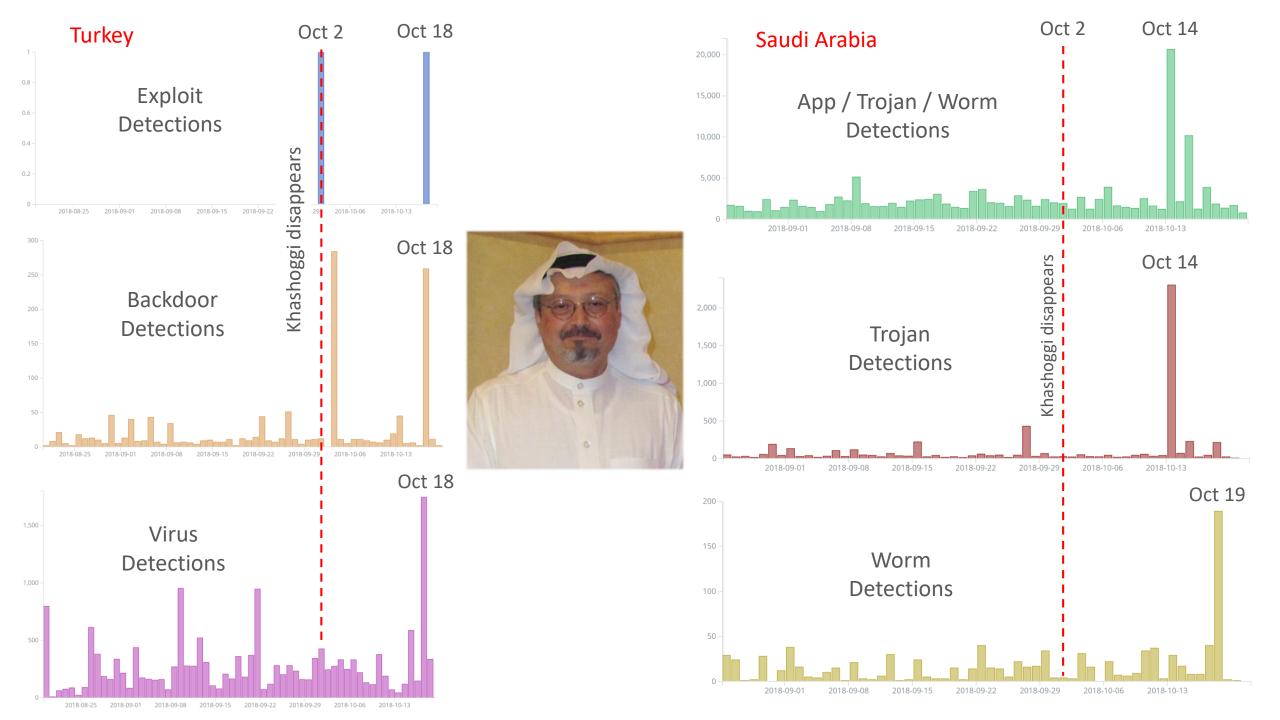


200

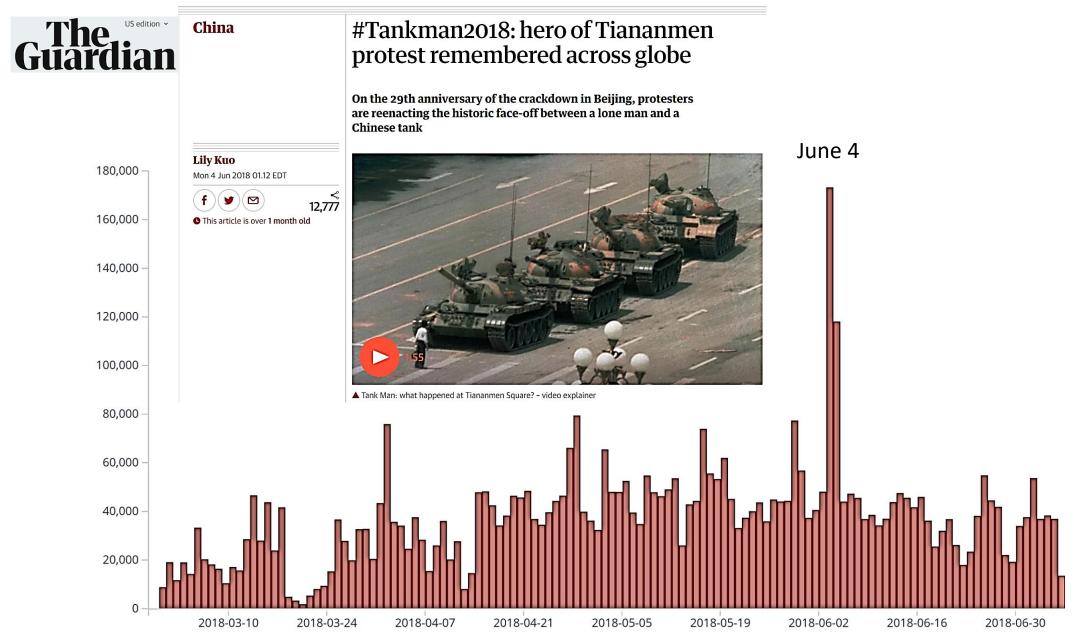
150

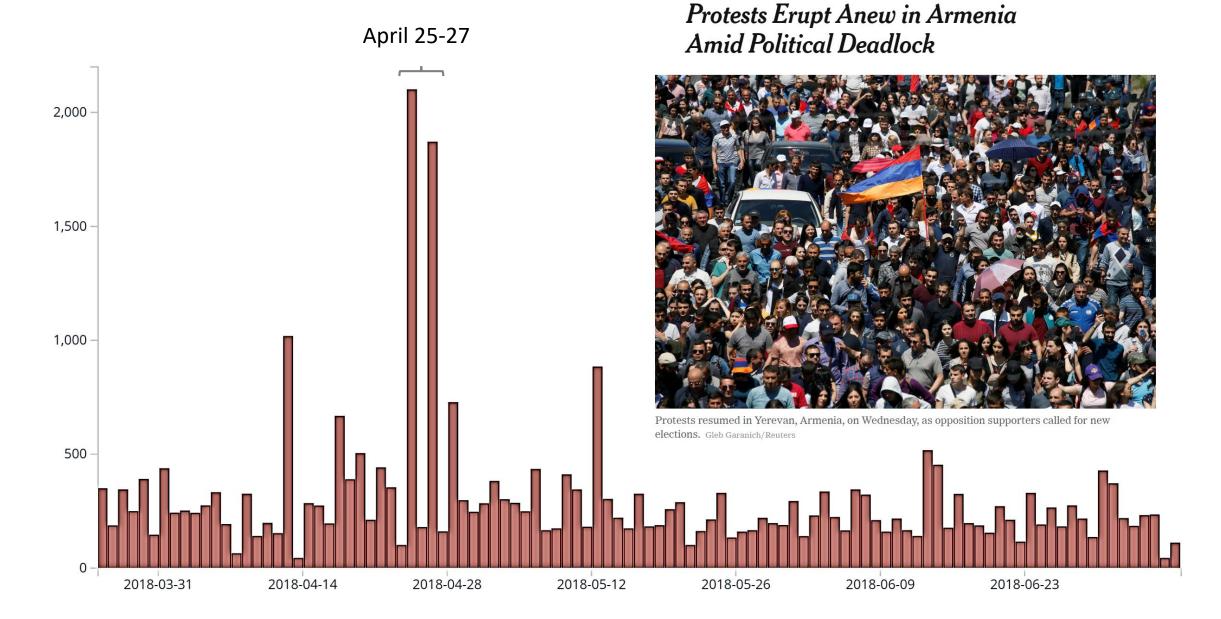
100

50

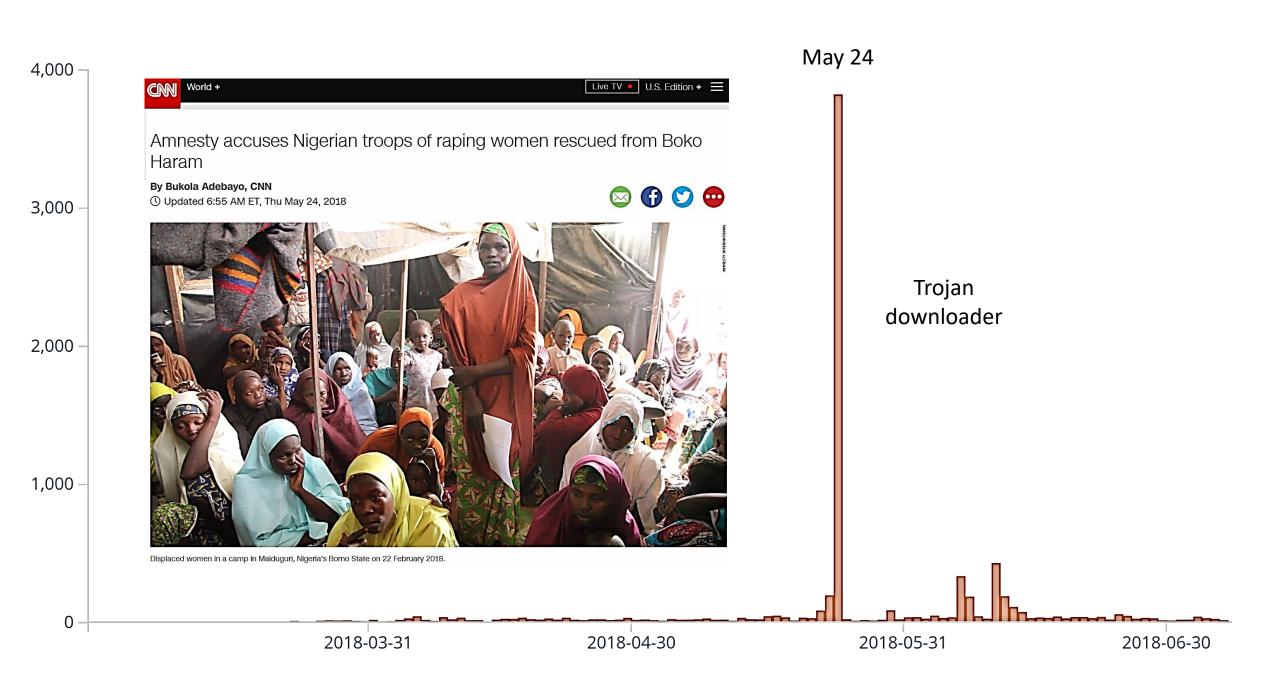


World ▶ Europe US Americas Asia Australia Middle East Africa Inequality Cities Global development





Che New Hork Eimes April 25, 2018





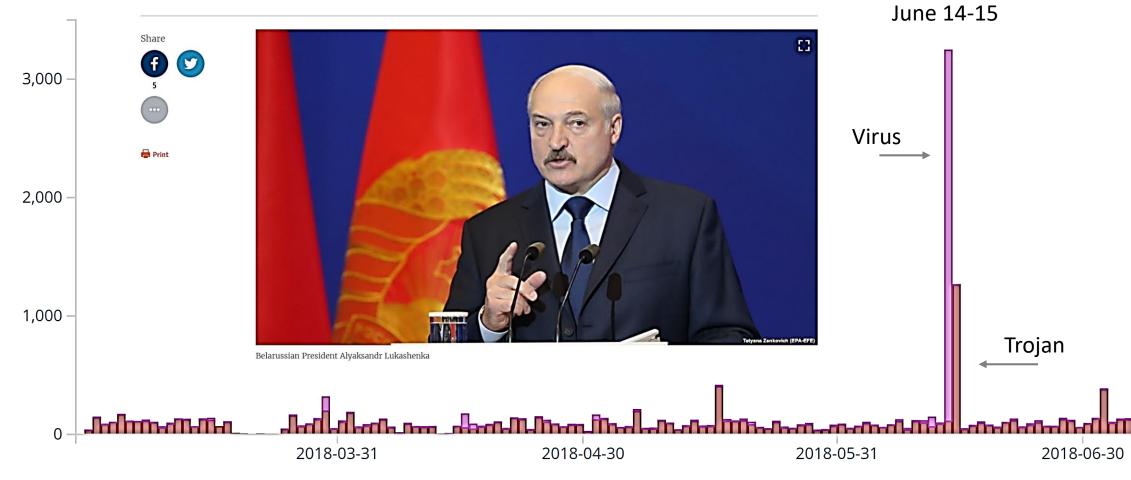
BELARUS

All RFE/RL sites



RUSSIA V IRAN CENTRALASIA V CAUCASUS V SOUTHASIA V BALKANS V EAST EUROPE V VISUALS PRESSROOM ABOUT

Belarus Passes Legislation Against 'Fake June 14, 2018 19:18 GMT RFE/RL's Belarus Service News' Media







BUSINESS NEWS MARCH 13, 2018 / 6:58 AM

March 12-13 EU adds Bahamas, U.S. Virgin Islands, St Kitts to tax haven list 10,000 13/03/2018 ⊮ f **Reuters Staff** 1 MIN READ BRUSSELS (Reuters) - European Union finance ministers added the Bahamas, the U.S. Virgin Islands and Saint Kitts and Nevis to the EU blacklist of tax havens on Tuesday, an EU document said. 8,000 Saint Kitts and Nevis Detections 6,000 4,000 10 A A A A LLAAAA BE 2,000 0 2018-03-24 2018-05-19 2018-03-10 2018-04-07 2018-04-21 2018-05-05 2018-06-02 2018-06-16 2018-06-30

Russia Considers Croatia's Decision to Be Unfriendly Act

By HINA, 27 Mar 2018, 09:07 AM Politics

March 28

200,000

150,000

100,000

50,000





ZAGREB, March 27, 2018 - The Russian Embassy in Croatia expressed regret over the Croatian government's decision to expel a Russian diplomat as a sign of solidarity with the United Kingdom over the poisoning of former Russian double agent Sergei Skripal in the UK, describing its decision as an act of hostility.





UKRAINE

Deadly Spike In Fighting Reported In Eastern Ukraine

May 22, 2018 01:27 GMT

engadget

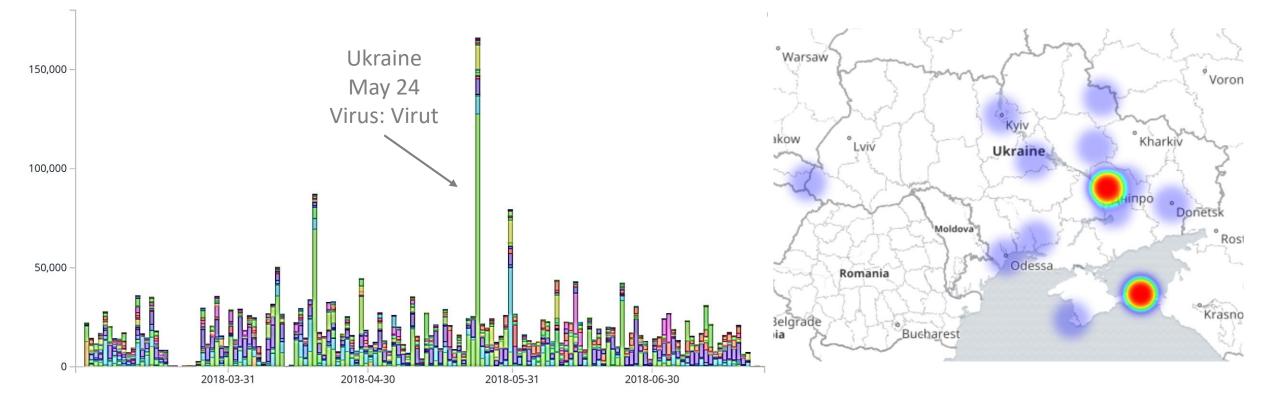
Ukraine claims it's the target of a massive Russian cyberattack

Hackers could disrupt this weekend's Champions League final in Kiev. Kris Holt, @krisholt 05.23.18 in Security

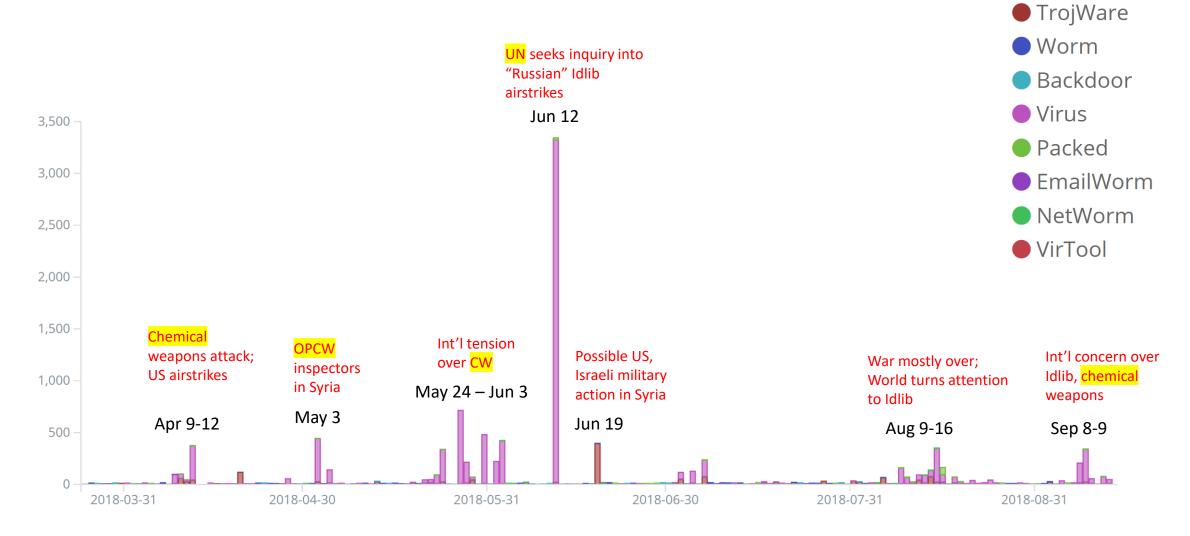
UKRAINE

Ukraine Showcases Javelin Firepower From United States

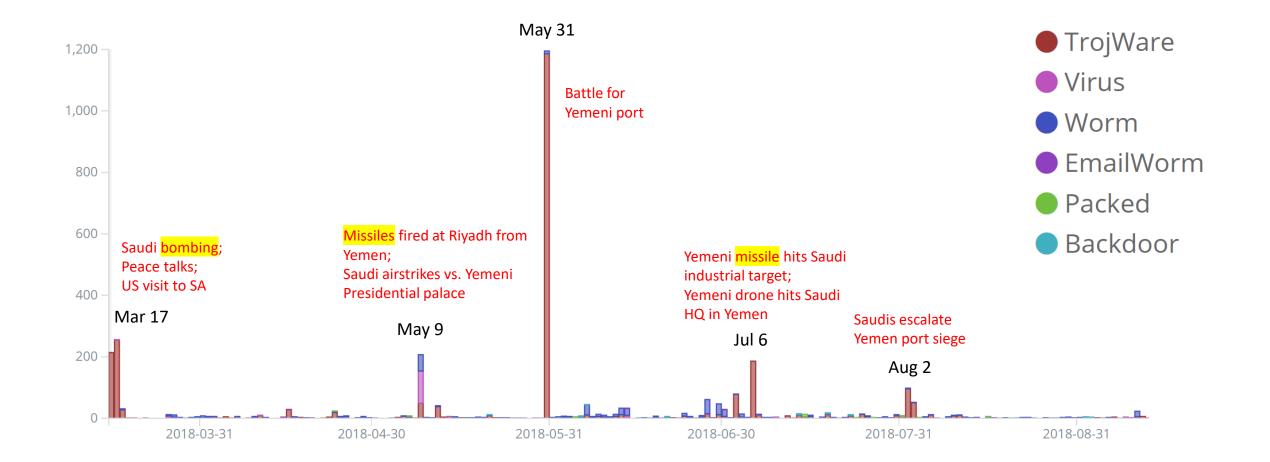
Last Updated: May 23, 2018 05:29 GMT

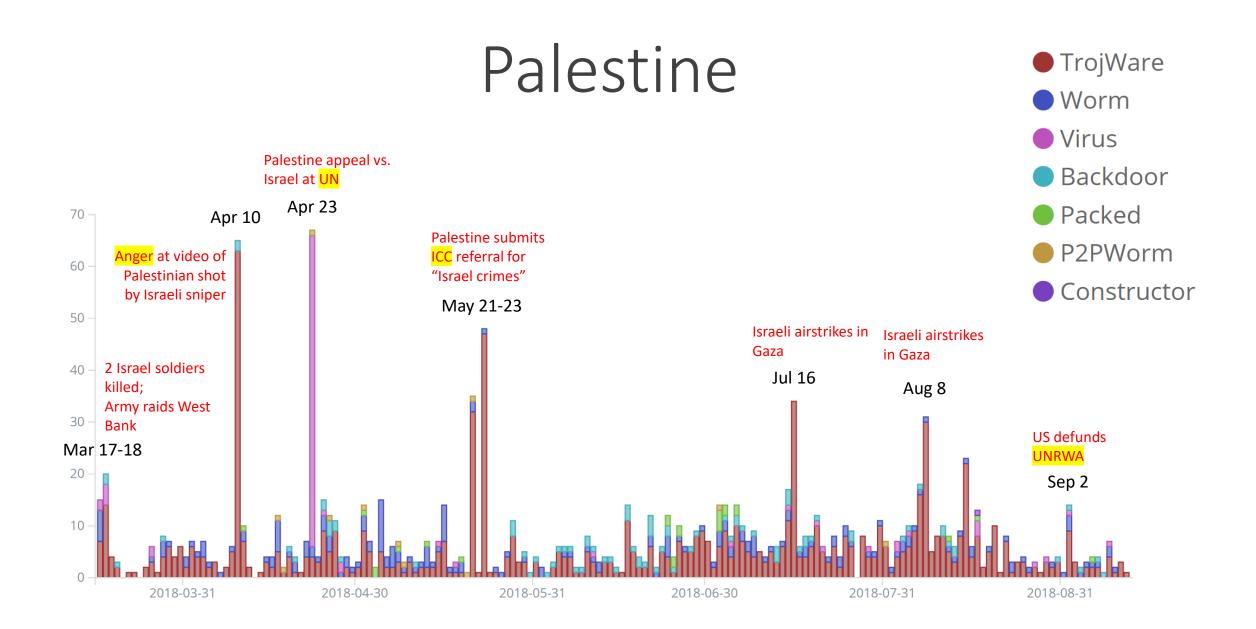


Syria

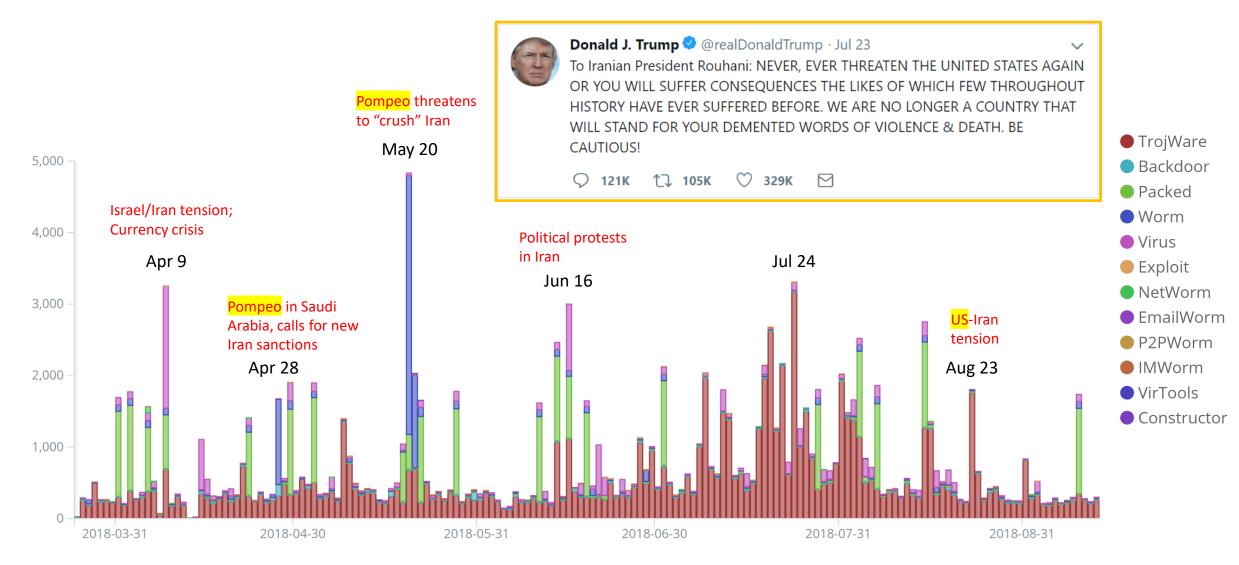


Yemen

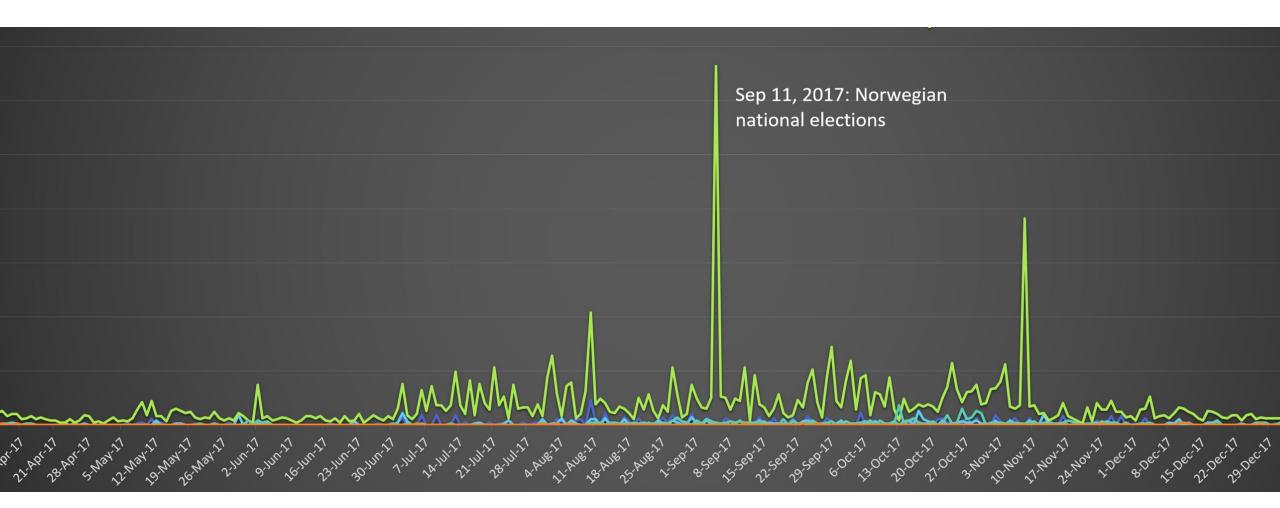




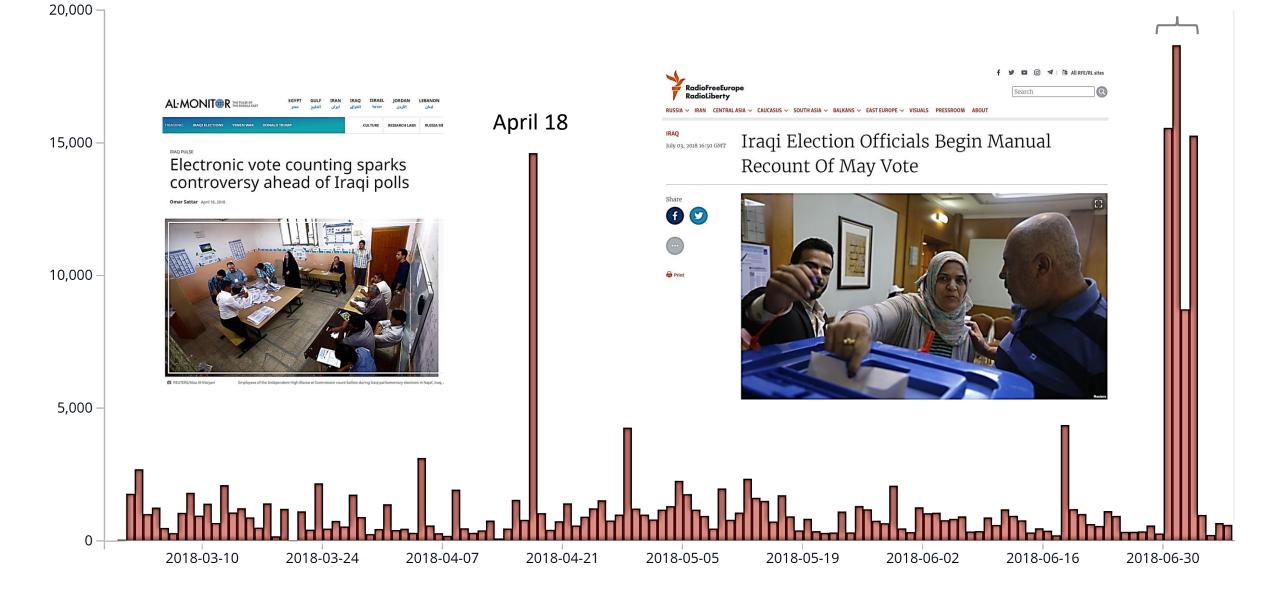
Iran

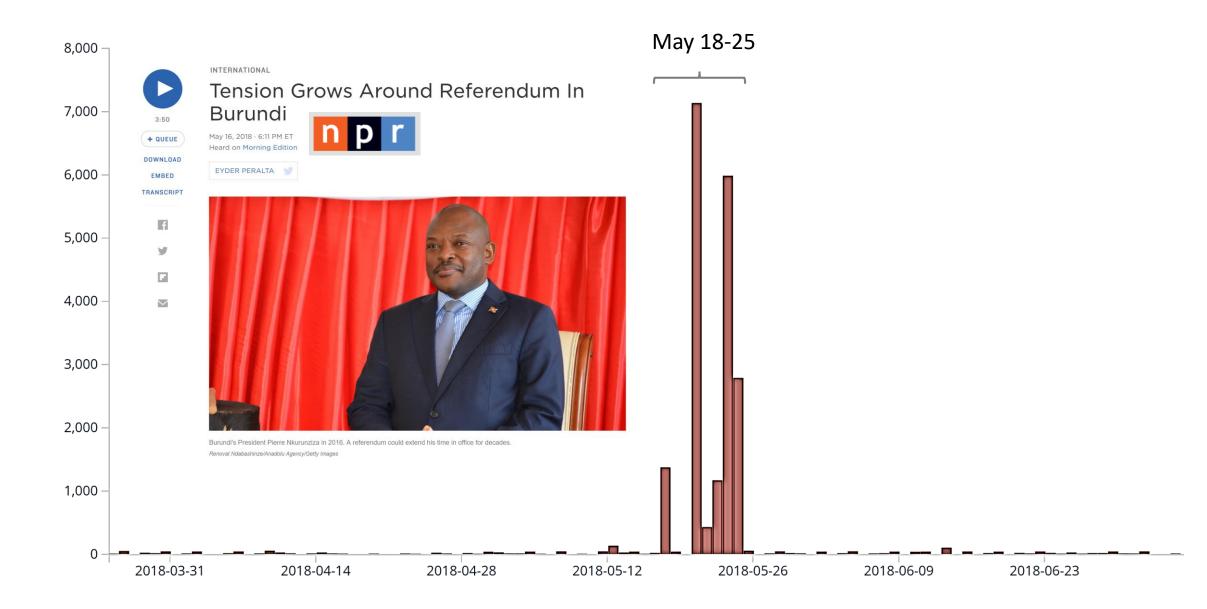


U.S. Inauguration All USA / Russia / China detections Jan 20, 2017 120 q:us > count q:ru > count q:cn > count 100 80 60 40 20 Comodo Malware Detections 2016-11-01 2016-11-08 2016-11-15 2016-11-23 2016-12-01 2016-12-08 2016-12-16 2016-12-24 2017-01-01 2017-01-08 2017-01-16 2017-01-24 (14



July 1-4

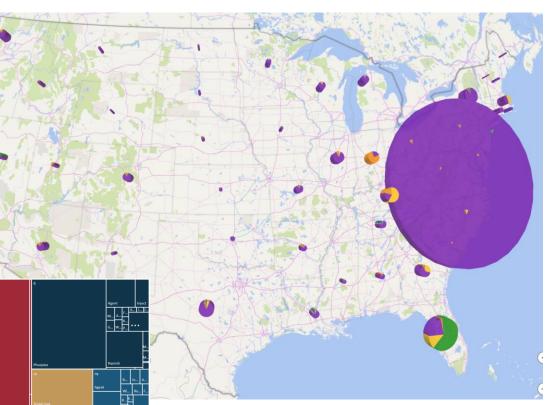




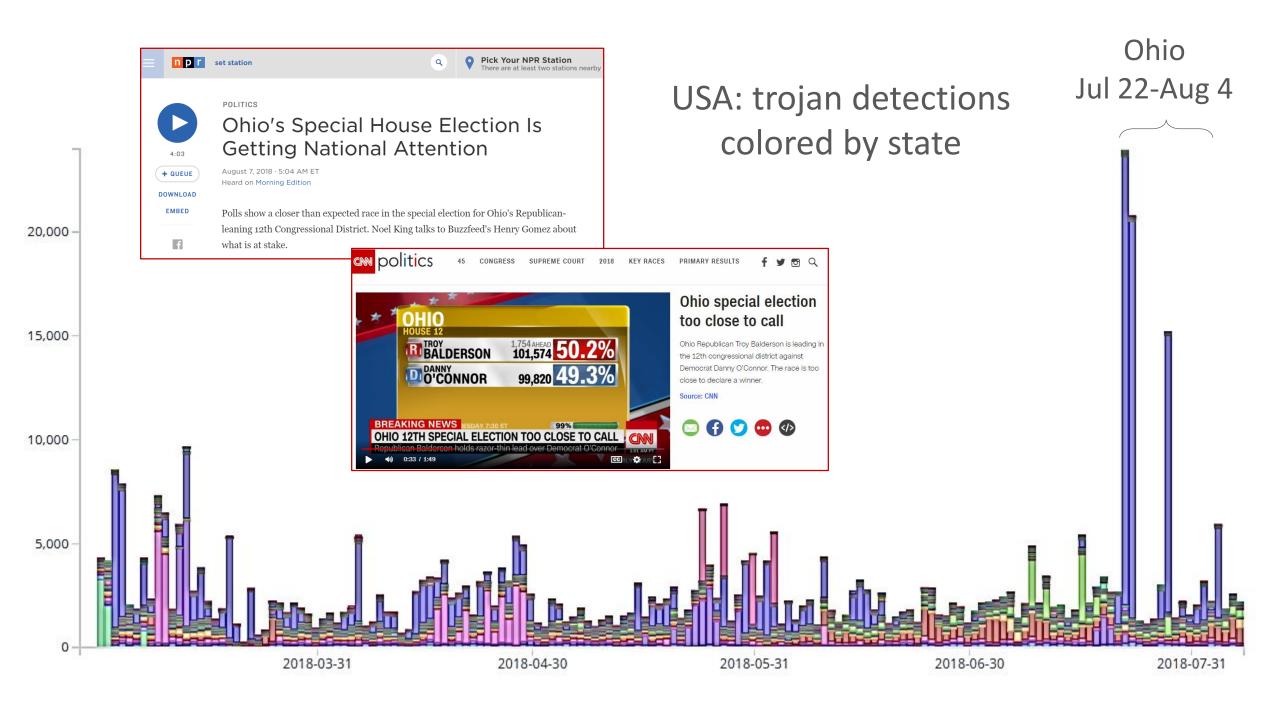
Virginia Nov 2017 Gubernatorial Election

Va

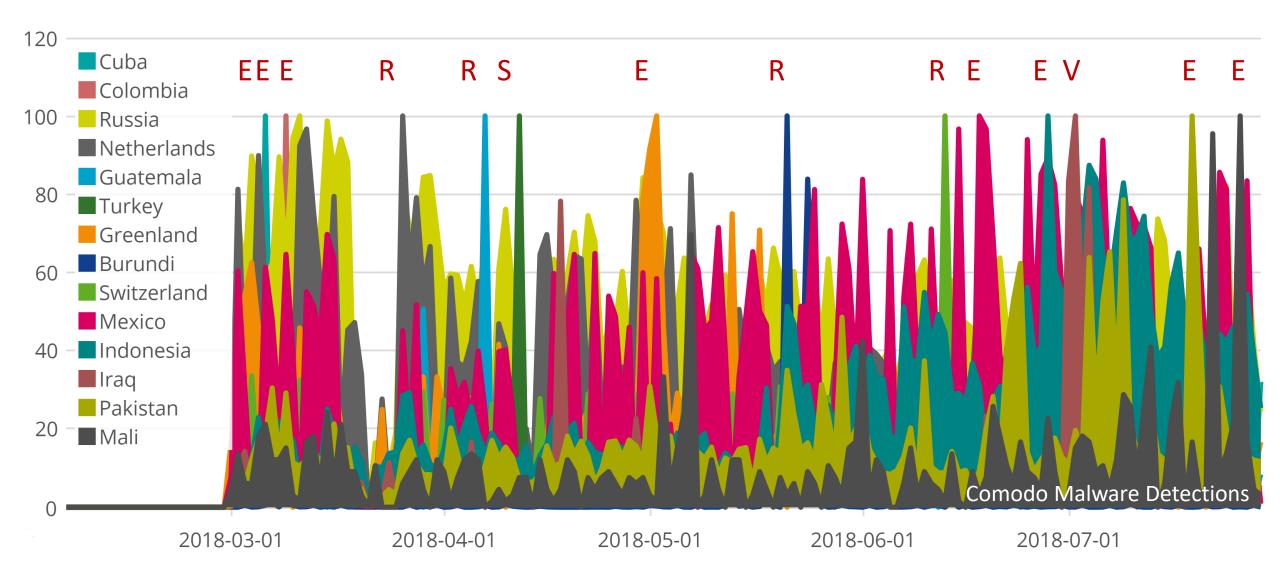
Kryptik

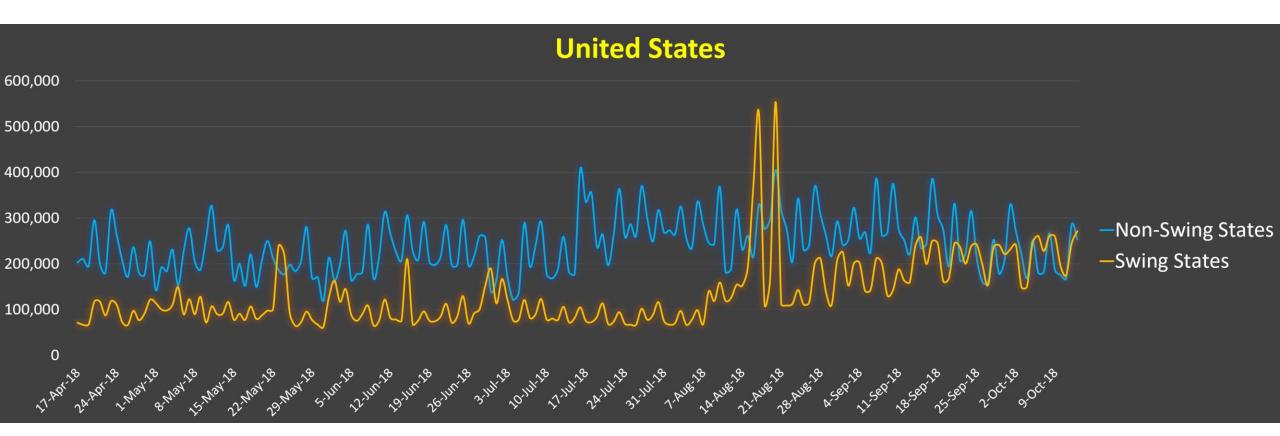




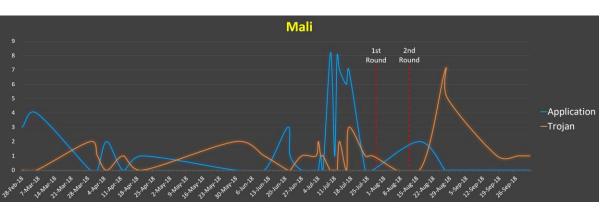


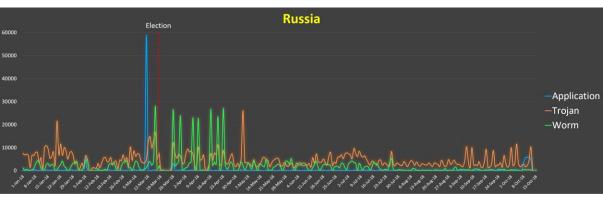
E = Election / R = Referendum / S = Snap election call / V = Vote recount

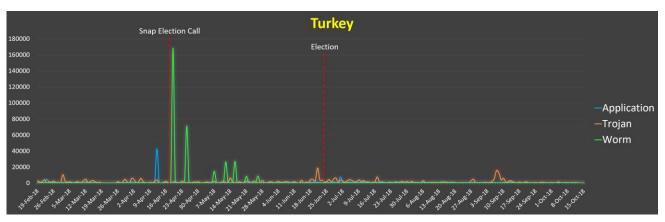




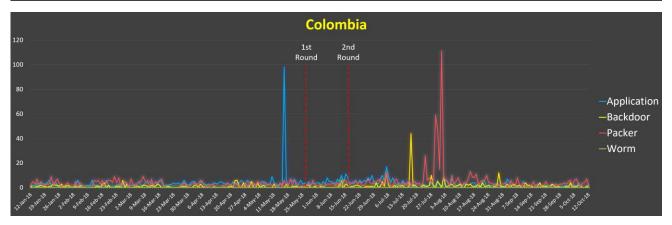
Cyber Kill Chain: National Scale

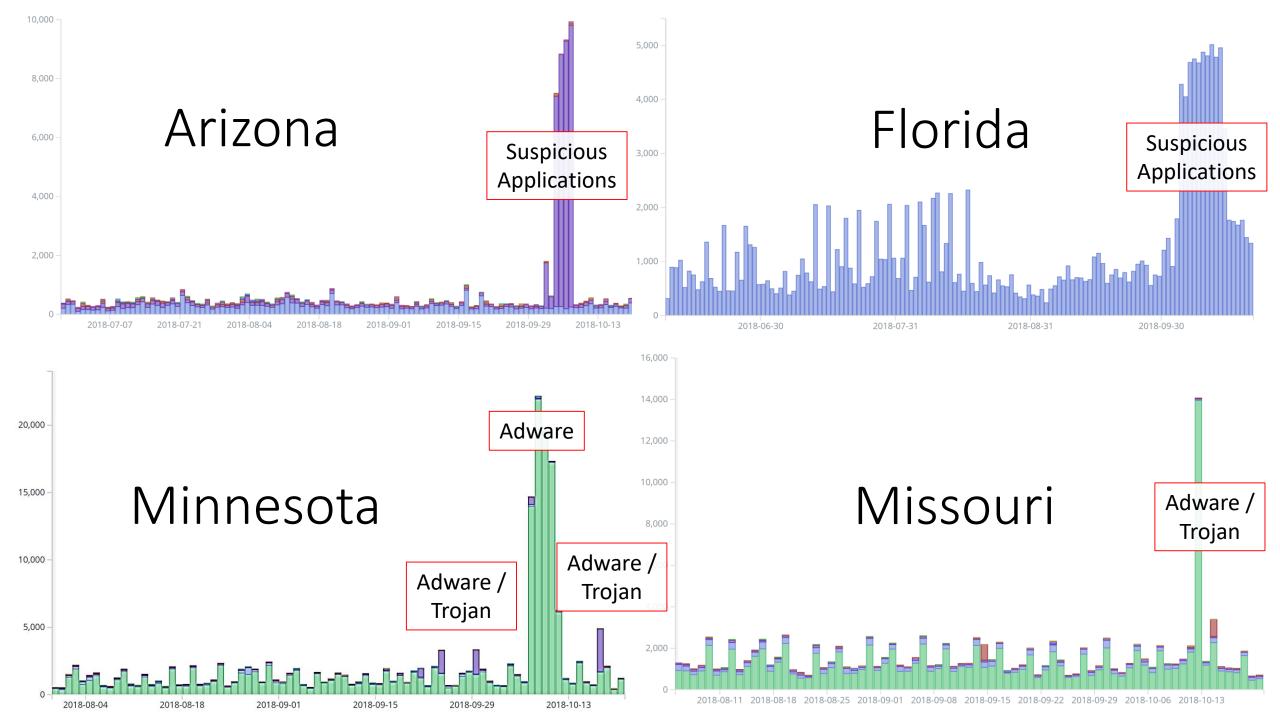


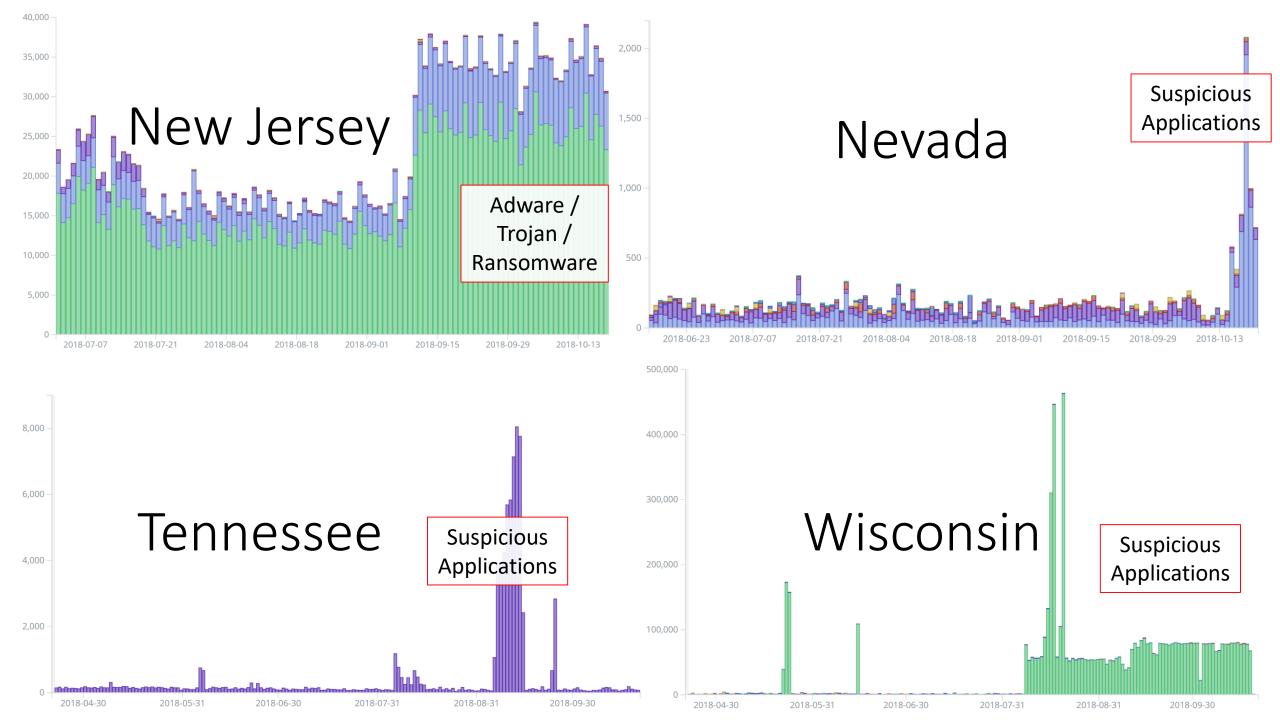


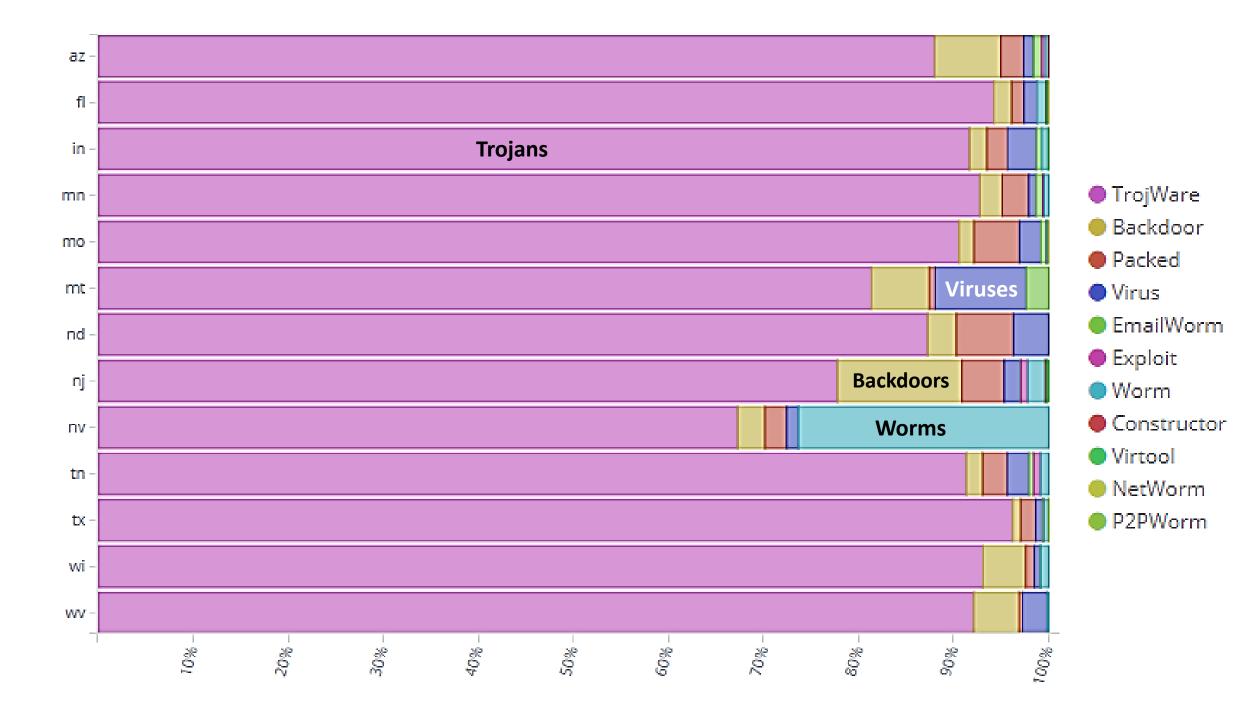












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