



Western
Area Power
Administration

Cyber Security Threats

Dawn Roth Lindell, Senior Vice
President and Chief Information Officer

May 25, 2017

County Commissioner's Meeting

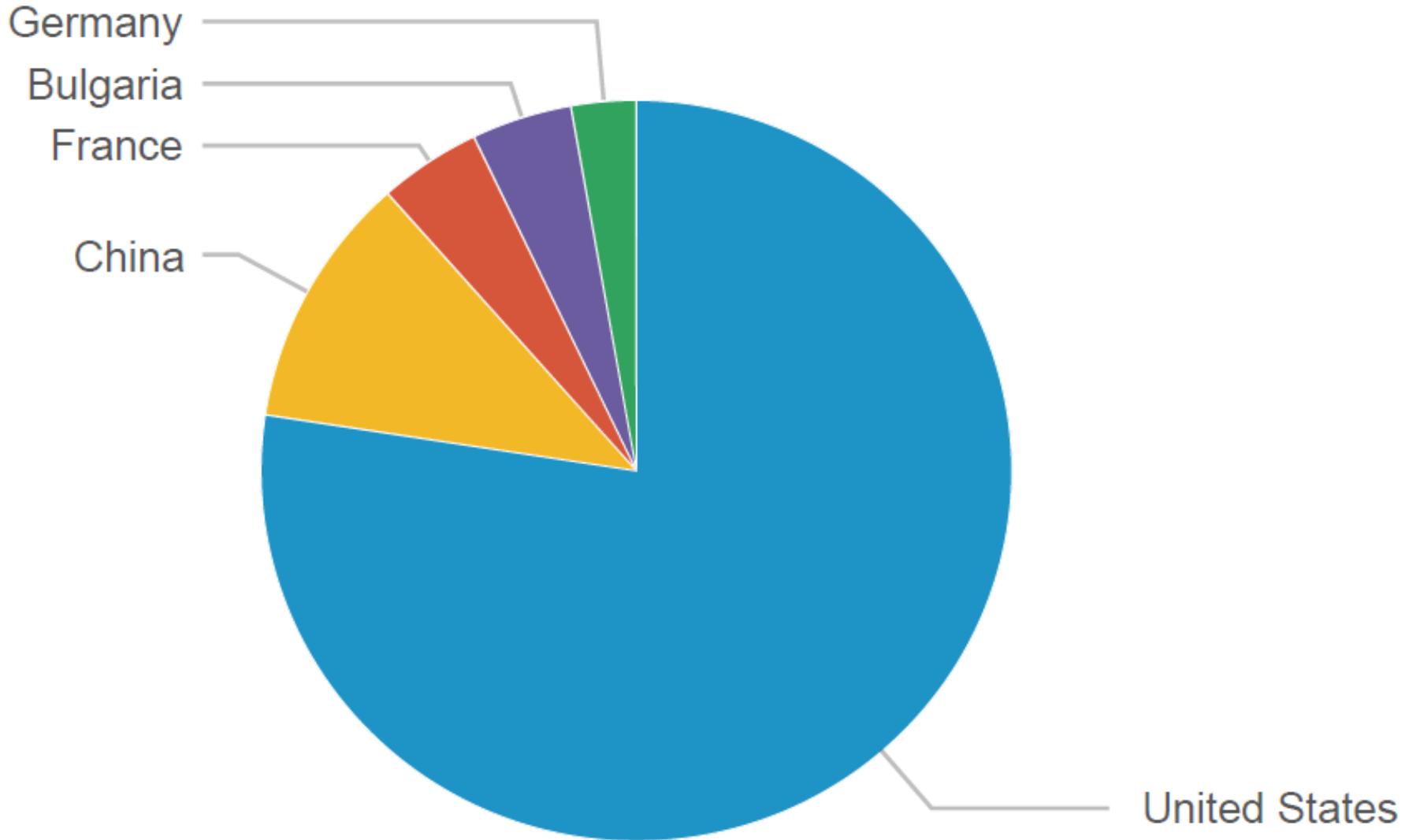


Threats: Capability and Intention

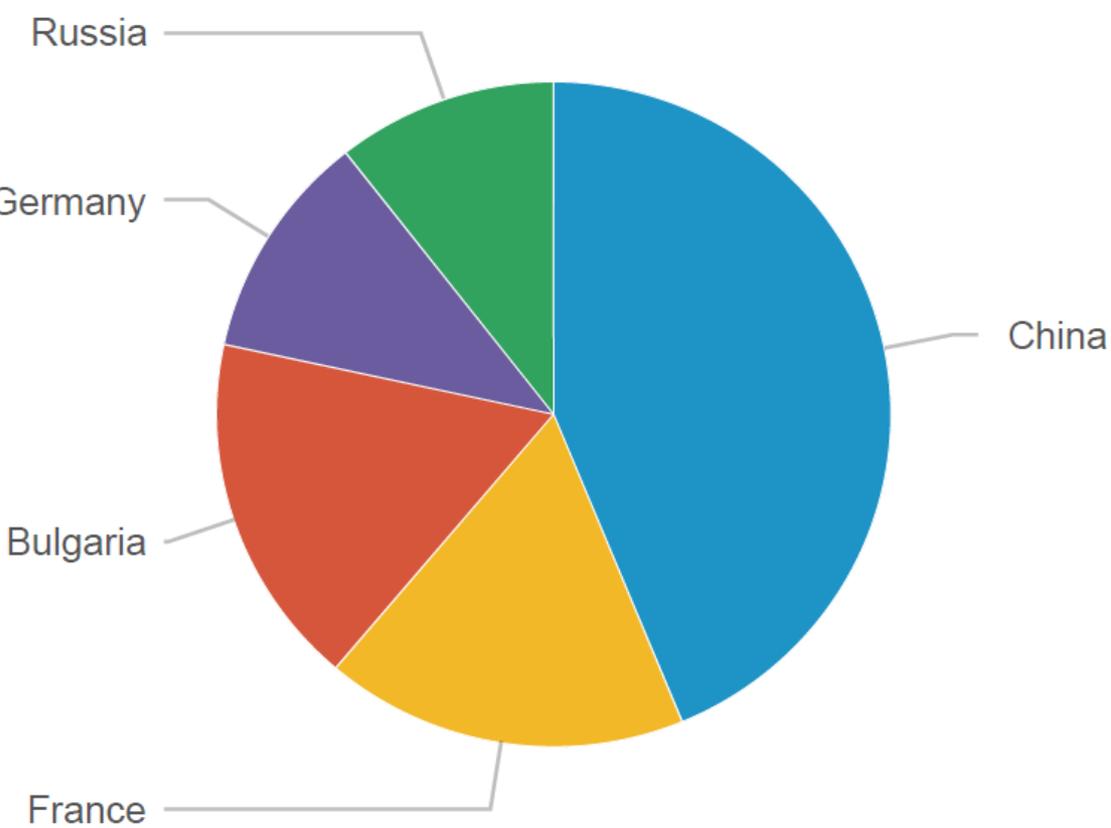
- China
- Russia
- North Korea
- Hacktivists
- Iran
- ISIL/ISIS



WAPA Blocks by Country for April



WAPA Blocks by Country- April exclude US



Source Geographic Country/Region	Count
United States	1141425
China	162962
France	64807
Bulgaria	64007
Germany	41076
Russia	39390
Hong Kong	36723
United Kingdom	31663
Canada	28287
Czech Republic	27161
India	22296
Republic of Korea	21554
Vietnam	9960



Attacks in the last three years

- China

- 5 Chinese nationals indicted (May 2014)
- Ugly Gorilla (June 2014)
- Telvent intrusion (Sep 2014)



Sun Kailiang



Huang Zhenyu

- Russia

- Ukraine electric system 2015, 2016
- Black energy (Oct 2015)



Wen Xinyu



Attacks in the last three years

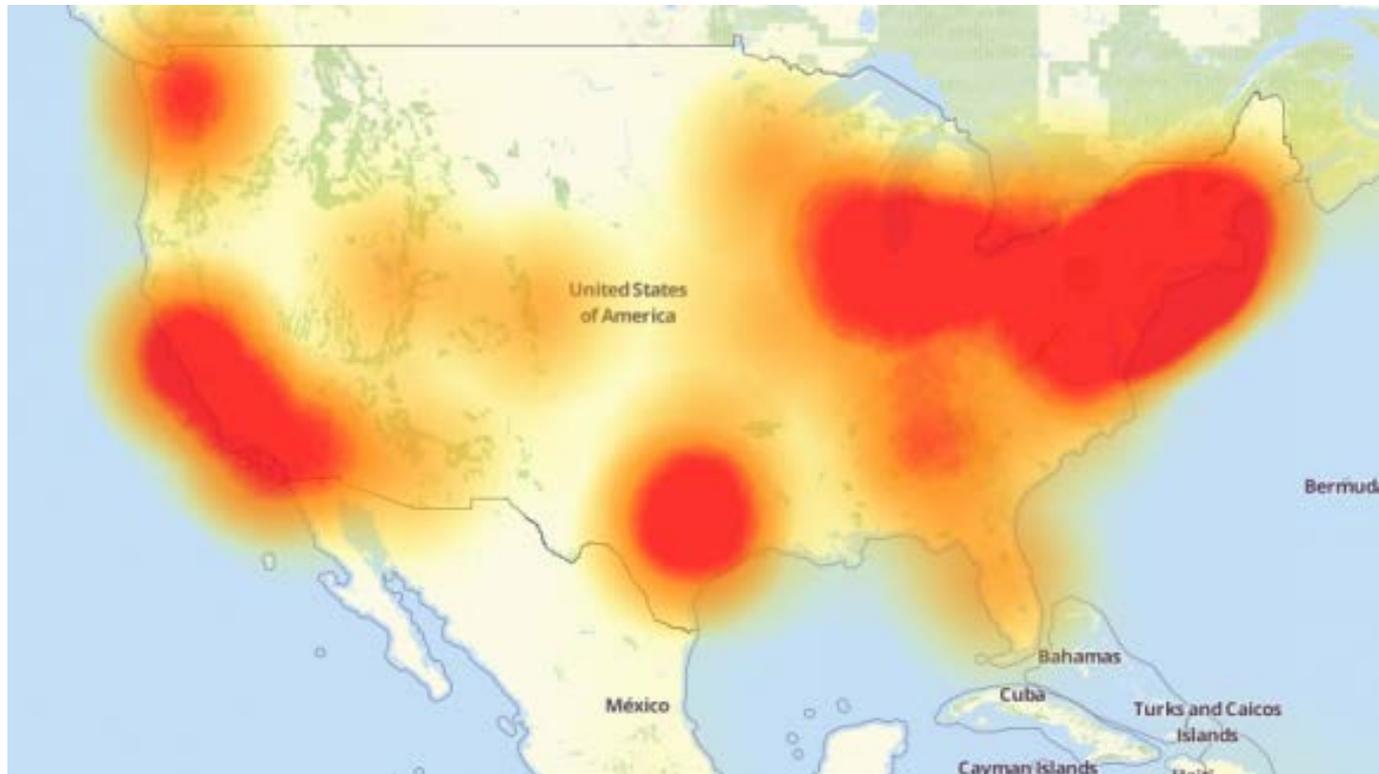


- North Korea
 - Sony (Dec 2014)
 - Wannacry ransomware (May 2017)
- Iran
 - Bowman Avenue Dam – NY (March 2016)
- Hacktivist -
 - Water Utility – customer records, SCADA impact (2016)



Impact of some major attacks

- Dyn attack (October 2016)



Impact of some major attacks



Vulnerabilities in the last three years

- The big ones:
 - Heartbleed – 2014
 - Shellshock/Bashdoor – 2014
 - EternalBlue – April 2017
- Industrial Control Systems alone:
 - Positive Research Center – Identified 691 (October 2015)
 - Fire Eye – identified 1,552 (Jan 2000 – April 2017)



Our reality

- Cyber attack or physical/cyber attack impact could cause widespread communication outage.
- In the midst of a disaster (Waldo Canyon fire)
 - Cell phone very difficult for calls
 - Even texts took minutes or did not go through
 - Trunked radio system maxed with delays as long as 90 seconds.



We must recognize we are:

- Vulnerable
- Under attack
- At risk
- Responsible to harden our assets
- Have multiple communication alternatives
- In need of rapid information sharing



Questions?

