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FireEye Intelligence: Threat Landscape Overview

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Agenda

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How FireEye Defines the Threat Landscape

Intelligence Update for Europe

Threat Actor Categories

	Nuisance	Data Theft	Cyber Crime	Hacktivism	Network Attack
Objective	 **Access & Propagation**	 **Economic, Political Advantage**	 **Financial Gain**	 **Defamation, Press & Policy**	 **Escalation, Destruction**
Example	Botnets & Spam	Advanced Persistent Threat	Credit Card Theft	Website Defacements	Destroy Critical Infrastructure
Targeted	☒	☑	☑	☑	☑
Character	Automated	Persistent	Opportunistic	Conspicuous	Conflict Driven

APT Actors & Tactics

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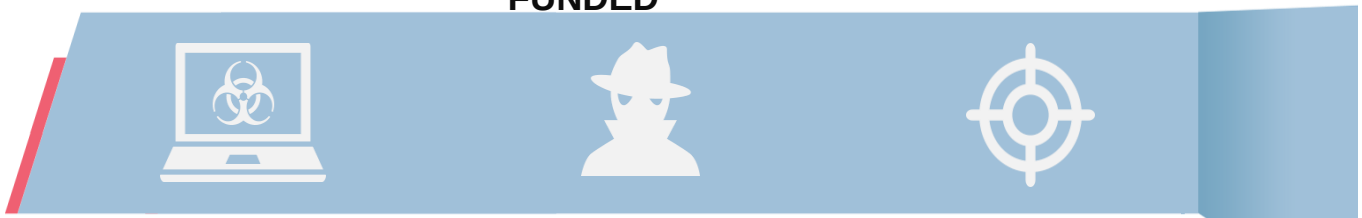


IT'S A "WHO," NOT A "WHAT"

- THERE'S A HUMAN AT THE KEYBOARD
- HIGHLY TAILORED AND CUSTOMIZED ATTACKS
- TARGETED SPECIFICALLY AT YOU

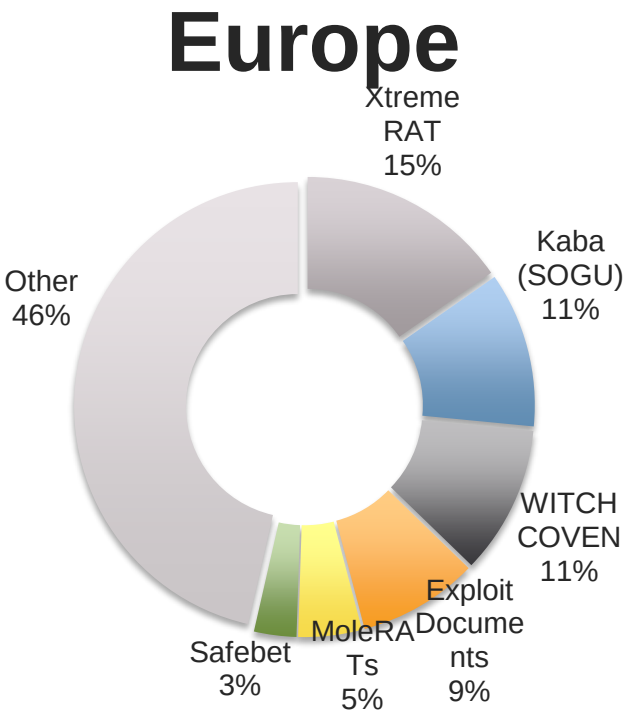
THEY ARE PROFESSIONAL, ORGANIZED AND WELL FUNDED

- NATION-STATE SPONSORED
- ESCALATE SOPHISTICATION OF TACTICS AS NEEDED
- RELENTLESSLY FOCUSED ON THEIR OBJECTIVE

IF YOU KICK THEM OUT THEY WILL RETURN

- THEY HAVE SPECIFIC OBJECTIVES
- THEIR GOAL IS LONG-TERM OCCUPATION
- PERSISTENCE TOOLS ENSURE ONGOING ACCESS

What APT Malware is Prevalent in Europe?



- Kaba/SOGU used by many different Chinese threat groups
- WITCHCOVEN is a profiling script used by APT groups
- MoleRATs used by Middle Eastern threat groups

FireEye Detections: January – June 2015

Europe in Context

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Foreign Issues Are Domestic Concerns:

- Responding to Russian aggression
- Migrant Crisis
- Concerns over extremism
- Economic stability & energy security

Activity From a Range of Groups

– Intelligence Services - both allies and rivals

– Non-state actors engaging in their own operations

– Espionage, hacktivism, and the threat of computer network attack

The threat landscape in Europe reflects a mix of global actors and concerns

Russian Threat Activity

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- **Long History of Information Warfare**
  - Broader meaning: cyber, electronic warfare, information operations
  - Established cyber program: uses in both peace and war
- **Involvement of Military and Intelligence Units**
  - Russian Ministry of Defense Cyber Command
- **Focus on secrecy and operational security**
  - Stealthy programs and doctrine
  - Possible use of criminal groups and hacktivists
- **Employment for…**
  - Espionage
  - Support military operations
  - Influence through media and other “information” means

Russian Cyber Operations

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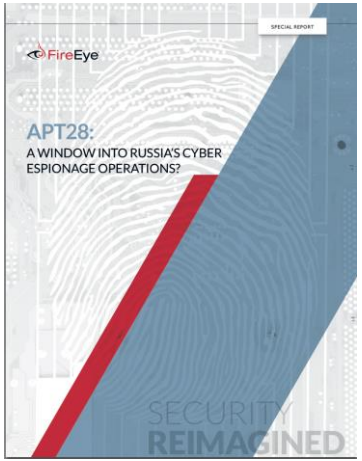
- **Espionage**
  - APT28 - Targeting think tanks, media, regime critics; iOS malware
  - APT29 - Targeting US, European govts & policymakers
- **Disruptive Activity Supporting Military Operations**
  - Estonia, Georgia, Ukraine
- **Reflections of Activity?**
  - Agent.BTZ / Snake / Turla / Uroburos
  - COZYCAR
  - Havex/Fertger
  - MiniDuke
  - BlackEnergy against ICS
- **Attribution Challenges**
  - RU Govt vs. RU Actor
  - Smoke and mirrors



Chinese Threat Activity

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- **Cyber Activity Mirrors State Interests**
  - Protect Supremacy of Chinese Communist Party
  - Build economy, society, and military
  - 2050: Become a world-class power
- **Groups We Track**
  - Over two dozen groups
  - Some active for periods of 10 years or longer
  - Comprised of military and likely state security units
  - At least 3 groups are contractors
- **Targets**
  - Massive, worldwide scale
  - All sectors: Government, Industry, Non Profit

Current Five-Year Plan Priorities
Food and Beverage
Creative Industries
Specialized Manufacturing
Biotech/Health Sciences
Energy Industry
IT and Communications

New Trends Through 2014

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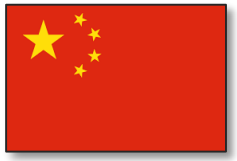
- **Adapted Social Engineering**
  - Use of social media to interact with targets and develop trust before deploying a payload
- **Alternations to Malware**
  - UDP backdoor
  - Encryption and modularity
  - Memory only malware
  - C2 leverages DNS hijacking of legitimate domains
- **Data Theft via DropBox to Blend in with Legitimate Traffic**
- **Use of profiling scripts**
- **Healthcare Breaches, Office of Personnel Management, PII Theft**
- **Ties Between China-based APT Groups and DDoS Attacks?**



Other State Espionage Involving Europe

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- **France**
  - Babar, Casper, Bunny
  - Greece, Spain, Syria
- **UK**
  - Regin
  - Telecommunications, researchers focusing on advanced mathematics and cryptology
  - Belgium, Germany, Algeria, Iran, Syria, Russia, Pakistan, others
- **US**
  - Equation Group
  - Financial institutions, Islamic scholars, and other victims
  - Germany, Switzerland, France, Belgium, the UK, and elsewhere

Hacktivists & the “CyberCaliphate”

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- **Hacktivists allegedly target French websites post-Paris siege**
  - ~ 20,000 sites affected
  - Distributed denial of service attacks, defacements
  - French military official attributes to “well-known Islamist hackers”
- **“CyberCaliphate” targets TV5 Monde**
  - Apparent escalation in tactics
  - Disrupts programming on 11 channels
  - Defaces website and social media accounts
  - Claims to act in support of ISIS – no firm attribution or ties to ISIS

Threats to the European Energy Sector: ICS Malware

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Havex

(aka Fertger / PEACEPIPE / “DragonFly” / “Energetic Bear”)

- Detected in Middle East networks in 2014
- Compromise via spear phish or SWC
- Targets are diverse: wide, multi-sector targeting
- Motivation somewhat unclear
  - » Espionage / intelligence collection
  - » Oil/gas: pricing data, negotiation positions?
  - » Business operations
  - » Possible disruptive ambitions?

BlackEnergy

ICS Variant

(aka “Quedagh Group” / “SandWorm”)

- Targets ICS Software
- Associated activity leveraged BlackEnergy to compromise NATO, Ukrainian targets

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THANK YOU