FireEye Intelligence: Threat Landscape Overview

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Agenda

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

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

THEY ARE PROFESSIONAL, ORGANIZED AND WELL FUNDED

IF YOU KICK THEM OUT THEY WILL RETURN

THERE'S A HUMAN AT THE KEYBOARD

HIGHLY TAILORED AND CUSTOMIZED ATTACKS

TARGETED SPECIFICALLY AT YOU

NATION-STATE SPONSORED

ESCALATE SOPHISTICATION OF TACTICS AS NEEDED

RELENTLESSLY FOCUSED ON THEIR OBJECTIVE

THEY HAVE SPECIFIC OBJECTIVES

THEIR GOAL IS LONG-TERM OCCUPATION

PERSISTENCE TOOLS ENSURE ONGOING ACCESS

What APT Malware is Prevalent in Europe?

Europe

Xtreme RAT 15%

Kaba (SOGU) 11%

Other 46%

WITCH COVEN 11%

Exploit Documents 9%

MoleRATs 5%

Safebet 3%
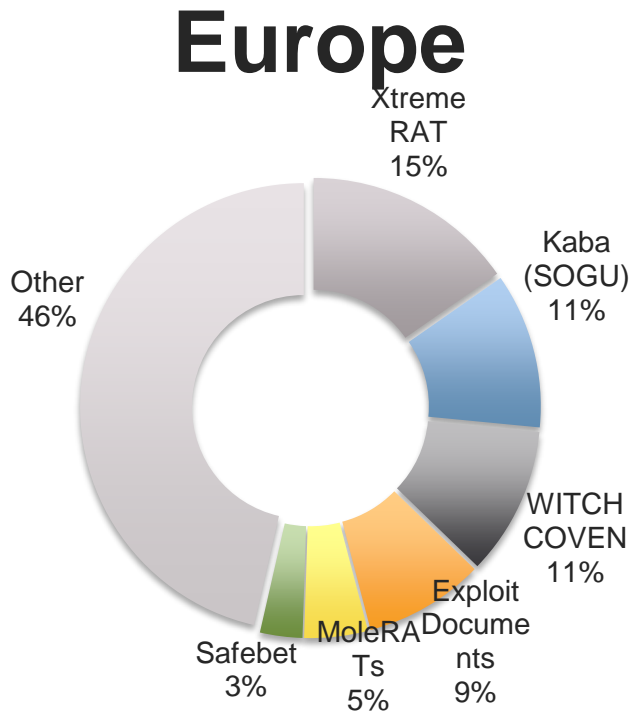
- Kaba/SOGU used by many different Chinese threat groups

- WITCHCOVEN is a profiling script used by APT groups

- MoleRATs used by Middle Eastern threat groups

FireEye Detections: January – June 2015

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Europe in Context

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

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Russian Threat Activity

- **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

- **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

SPECIAL REPORT

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APT28:
A WINDOW INTO RUSSIA'S CYBER ESPIONAGE OPERATIONS?

SECURITY REIMAGINED
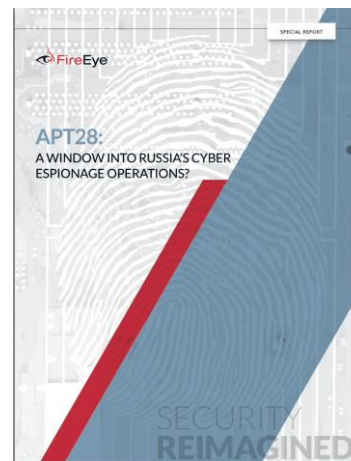
Chinese Threat Activity

- **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

- **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?**
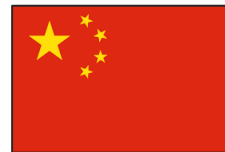
Other State Espionage Involving Europe

- **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"

- **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

FIREEYE SECURITY SUMMIT

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

THANK YOU