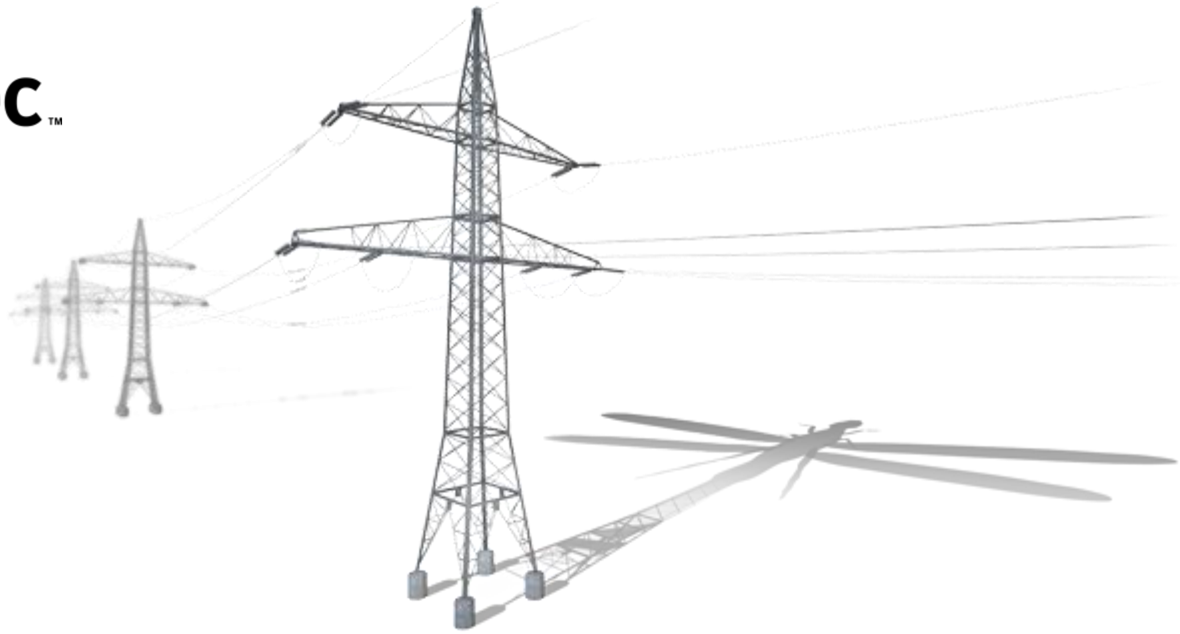
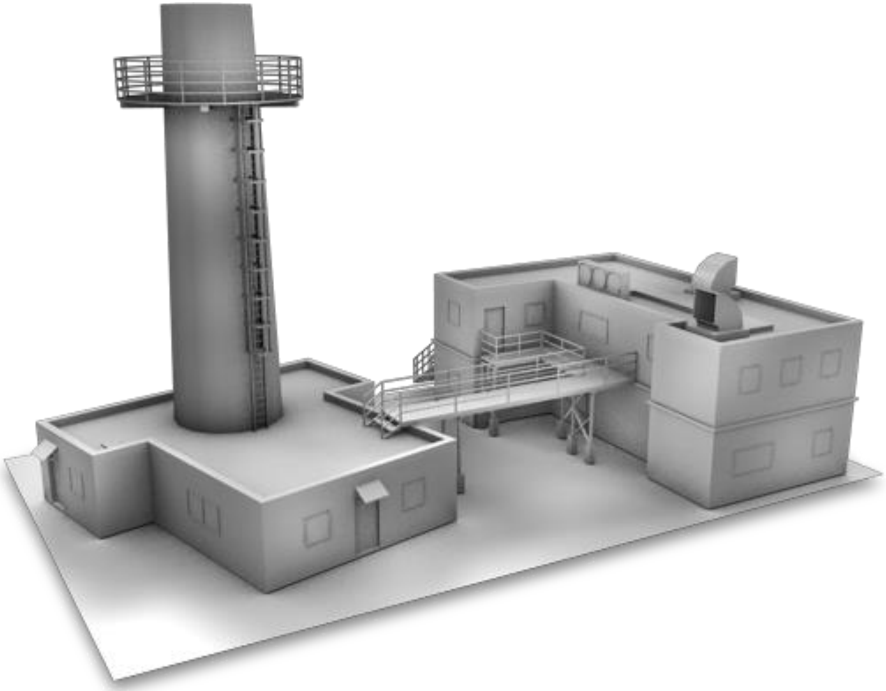


Dragonfly:
Energy Companies Under Sabotage Threat

Symantec Security Response

What is Dragonfly?

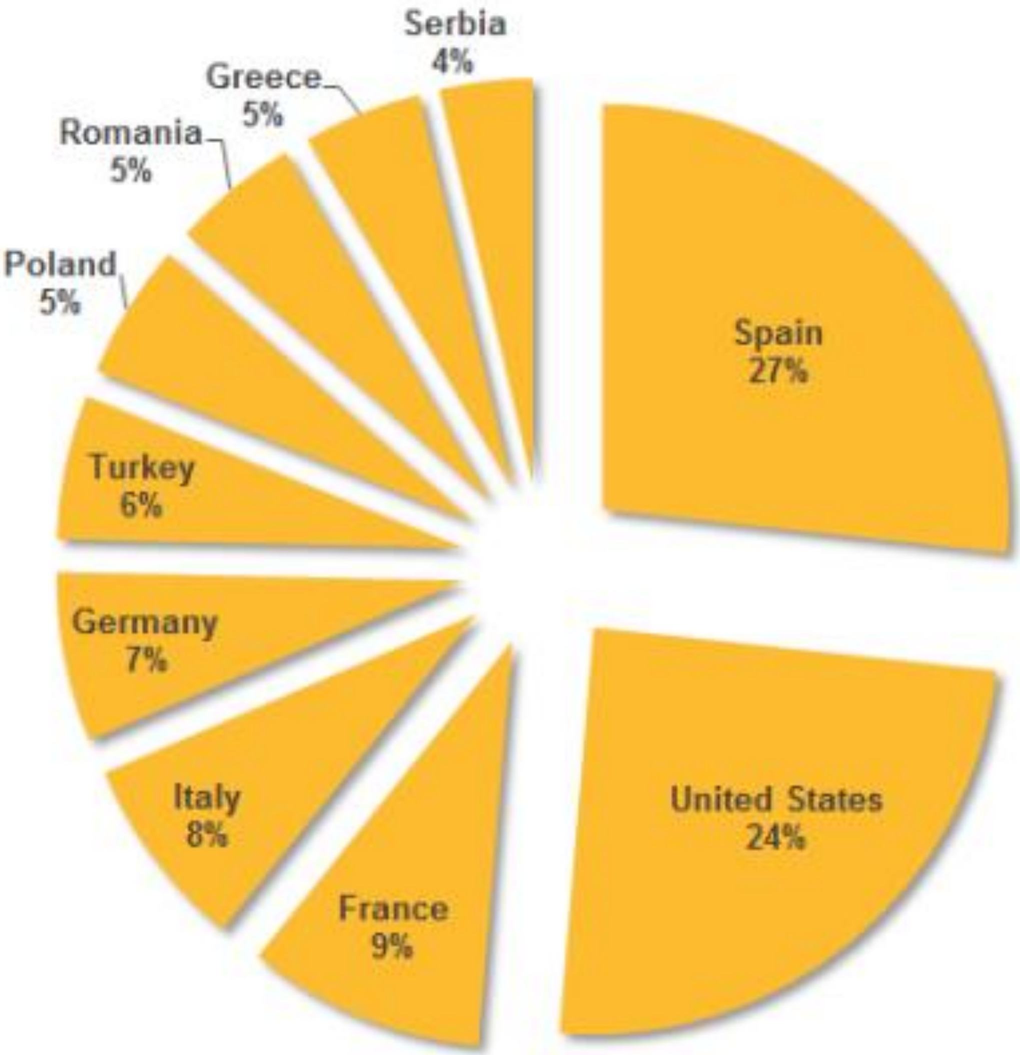
- Ongoing cyberespionage campaign
- Targeting the energy sector in Europe and US
- Stealing information
- Capable of sabotage



Targets

- Electricity infrastructure
- Electricity generation
- Industrial equipment providers
- Petroleum pipeline operators

Target Locations



The Dragonfly group

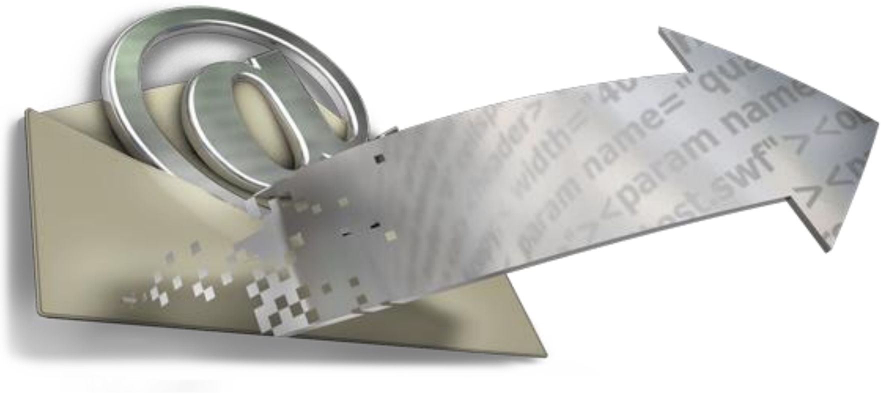
- In operation since at least 2011
- Initially targeted defense and aviation companies in the US and Canada
- Shifted focus to US and European energy firms in early 2013
- Priorities appear to be:
  - Persistent access to targets
  - Information stealing
  - Sabotage
- Has the hallmarks of state sponsored operation
- Appear to be operating in the UTC +4 time zone

Dragonfly employs three attack vectors

- Spam emails
- Watering hole attacks
- Compromising third party software

Spam campaign

- Generic spam emails sent to senior employees and engineers
- Began in February 2013 and continued into June 2013
- Emails bore one of two subject lines: “The account” or “Settlement of delivery problem”.
- Email disguised malware as PDF attachment



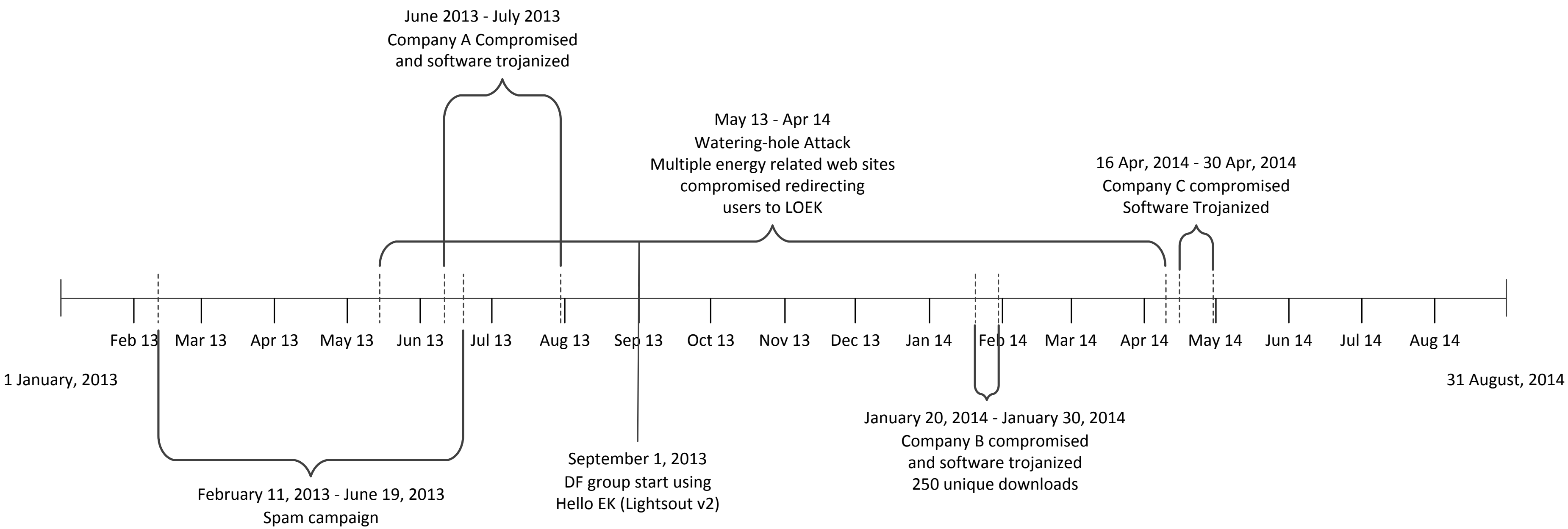
Watering hole attacks

- Group compromised legitimate websites related to energy sector
- Began in May 2013 and continued into April 2014
- Attacks redirected website visitors to other compromised legitimate websites hosting Lightsout Exploit Kit
- These sites dropped malware on to the victim's computer.

Compromising third party software

- Three ICS equipment providers targeted
- Malware inserted into the software bundles they had made available for download on their websites
- Victims inadvertently downloaded “Trojanized” software when applying software updates
- By targeting suppliers, attackers found “soft underbelly” that provided a path into bigger companies

Timeline of recent attacks



June 2013 - July 2013
Company A Compromised
and software trojanized

May 13 - Apr 14
Watering-hole Attack
Multiple energy related web sites
compromised redirecting
users to LOEK

16 Apr, 2014 - 30 Apr, 2014
Company C compromised
Software Trojanized

January 20, 2014 - January 30, 2014
Company B compromised
and software trojanized
250 unique downloads

February 11, 2013 - June 19, 2013
Spam campaign

September 1, 2013
DF group start using
Hello EK (Lightsout v2)

Tools: Backdoor.Oldrea

- Remote access tool (RAT) type malware
- Custom malware, either written by the group itself or created for it
- Favoured tool: used in majority of attacks
- Acts as back door for attackers allowing them to extract data and install further malware
- Also known as Havex

Tools: Trojan.Karagany

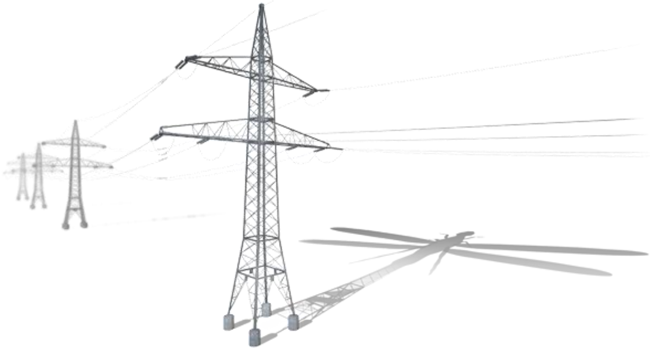
- Was available on the underground market.
- Source code leaked in 2010
- Dragonfly appear to have modified it for its own use
- Capable of uploading stolen data, downloading new files and running executable files
- Can run plugins, for collecting passwords, taking screenshots, and cataloging documents on infected computers.

Protection

- Symantec customers are protected from malware variants mentioned in this report. Detections are made by Symantec products using antivirus, Insight and behavioral technologies such as SONAR
- Symantec customers are protected from any attack using the exploits mentioned in this report when using Symantec products containing network threat protection/IPS technologies
- Details on Symantec's protection technologies can be found here: http://www.symantec.com/page.jsp?id=star

Summary

- Dragonfly is an ongoing threat
- Currently targeting energy sector in Europe and US
- Other sectors not immune, may be used as stepping stone
- Attacker capabilities
  - persistent access to networks
  - Information stealing
  - Sabotage



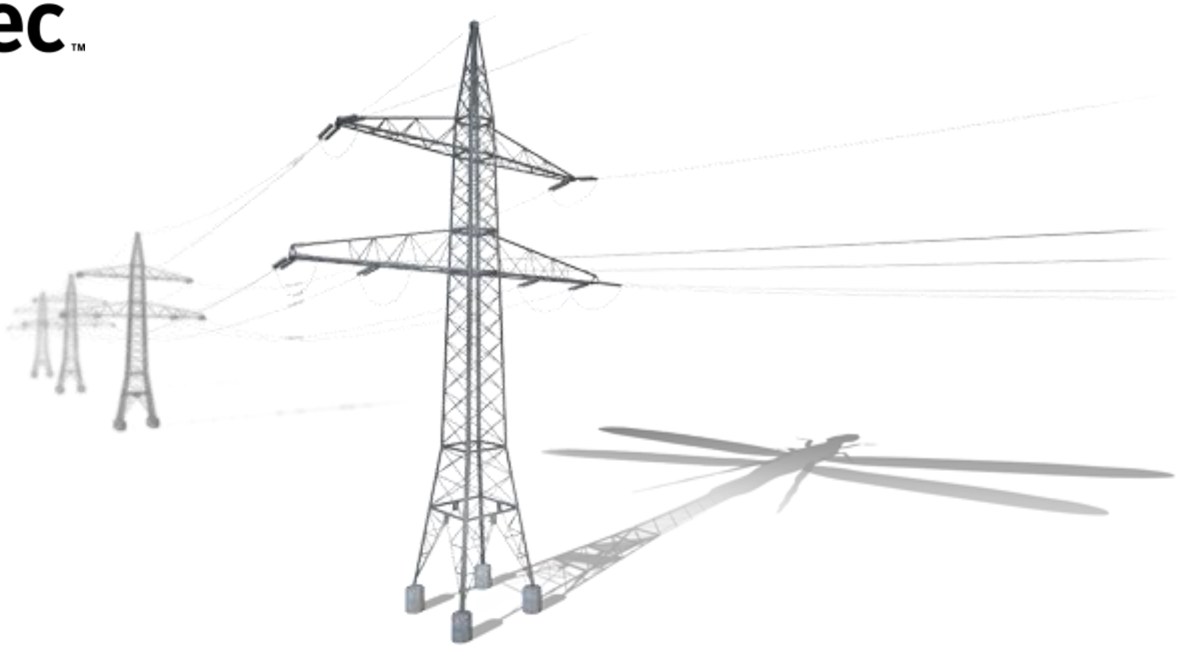
- Well resourced with a range of technical capabilities
- Likely to be state-sponsored

More Resources

Blog
http://www.symantec.com/connect/symantec-blogs/sr

Twitter
http://twitter.com/threatintel

Whitepapers
http://www.symantec.com/security_response/whitepapers.jsp



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