## Information sharing after botnet take-downs

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#### What to do after conquering a drop zone?

- Imagine being offered "vaguely obtained" 750GB worth of stolen data.
- How do you go about
  - Finding out whose data is in it
  - Reaching out to them
- Media attention



#### "Vaguely obtained"?

- Highly privileged information:
  - Bank statements
  - Medical records
  - Employee records
  - Trade secrets
- Can you trust the person who obtained the data?
- Wouldn't one break the law to accept this data?
  - Who would you trust with this sort of data anyway?
- Securely storing and destroying the data at a later date.



### Finding out whose data is in it

- Privacy, anyone?
- Not all of it is easily identifiable.
  - Not always clear what the data actually is to begin with!
  - If the owner cannot be machine determined, a person may need to look at it.
- Problem of scale.
- If you find a name, does that data belong to this person or a company?
  - Similarly, employees can work from home, or do private things at work.
- In case of financial information, can banks play a role?
  - They have a relation with the victim and can perhaps help stop any further damage.



#### Reaching out

- Who will be in charge of reaching out? The ISP's?
- Determining the relevant ISP is not always so easy.
- If you just have IP addresses, how about dynamic allocations?
- What will you tell the victim?
  - Will they understand what is going on?
  - Be careful not to look phishy yourself!
  - The age of the data is also relevant "Data may have been stolen from your company 6 months ago" is not a good message to send.
- Authenticating the owner.
  - Anyone can claim to be such and such and obtain juicy information.
  - Who is accountable if data falls in the wrong hands?
- How to securely hand over the relevant data?



#### **Media attention**

- Botnet take-downs are not that uncommon.
- This work is generally done without public visibility (which is good).
- But now, the media get involved.
  - PR nightmare.
  - Integrity goes out the window.
  - Government gets the blame for not doing enough, even though it is highly unclear what they could have done...



# Thank you for your attention

