ON SCANNING THE INTERNET
OR....
THE CURSE OF IN-THE-CLOUD URL SCANNING

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What Urls Am I Talking About?

Phishing

- Social Media Accounts
- Online Gaming Accounts
- WebMail Accounts
- Financial Institutions

Fraudulent Websites

- Fake Mortgage Websites
- Fake shipping Websites
- Fake (cheap) pills
- …. Actually all scams go here

Malware

- Old school Malware
- Fake AVS
- etc

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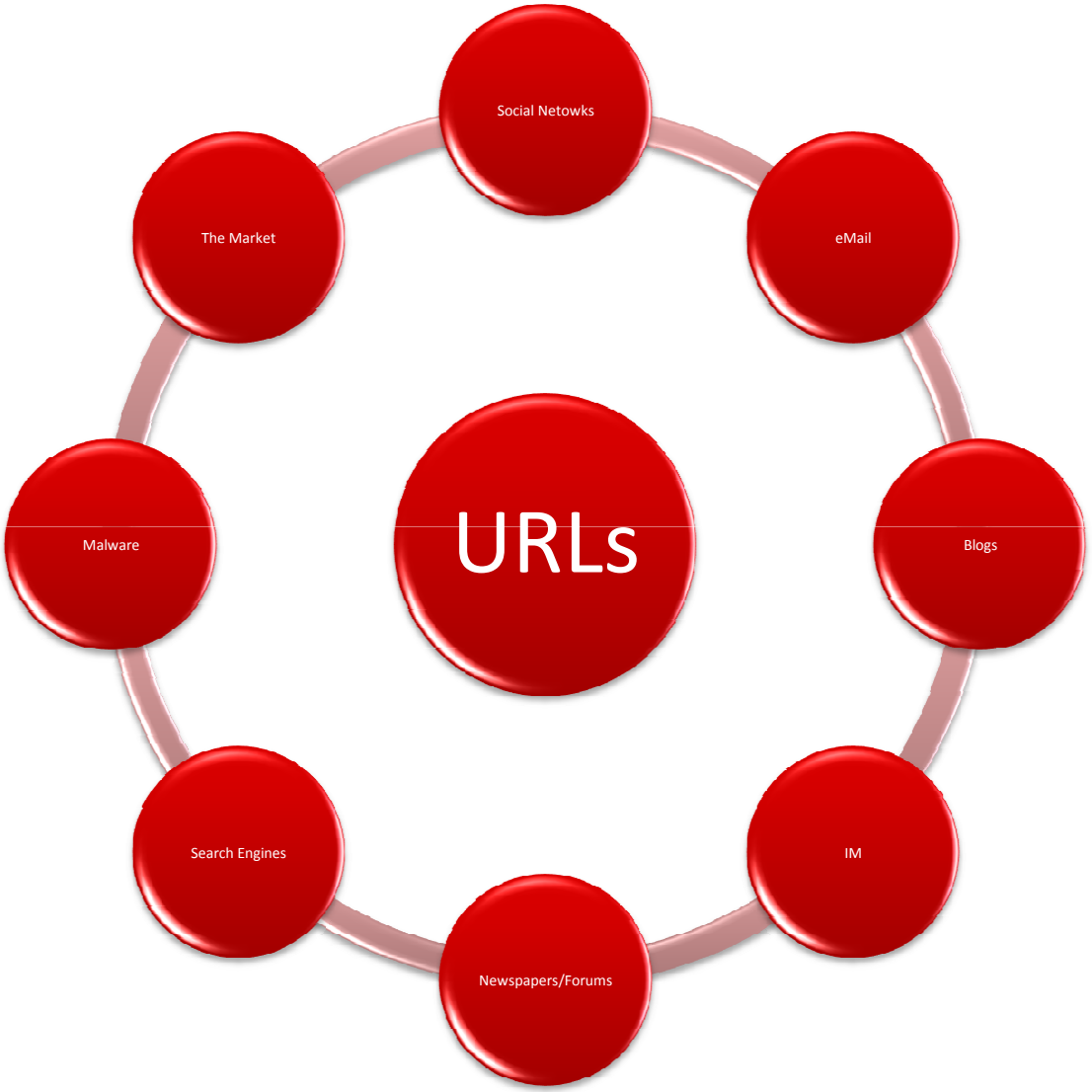
Where Do Urls Come From?



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Contents

- Short intro into the cloud
- Pros and Cons of cloud computing
- And some more pros and cons
- Some of our stories
- Obviously, some conclusions

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What is the Cloud? Where is the Cloud?

- Cloud Computing in the security industry has multiple definitions and several approaches.
- Security in the cloud means:
  - URL scanning
  - AV scanning
  - Spam scanning
  - RBL
  - And more

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Current Status of the Cloud Paradigm

- Pro Cloud
- Against Cloud
- A hybrid approach is better

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Why Should We Go for it? (the Strenghts)

- No versioning (no large product updates)
- Low resource consumption
- Higher speed
- Not OS dependant
- Not hardware dependant
- Instant access to updates
- New technologies available like outbreak detection or statistics based algorithms
- Sometimes…. It is also cheaper

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Why We Shouldn't? (the Weaknesses)

- No internet connection means no cloud
- Susceptible to DDOS attacks
- Resource Consumption just moved in the cloud. It didn't vanished!
- Connection spikes can cause false negatives (or, even DDOS->self)
- Instant updates can also mean instant faulty updates
- Data center failure means no detection (the cleaning lady effect)

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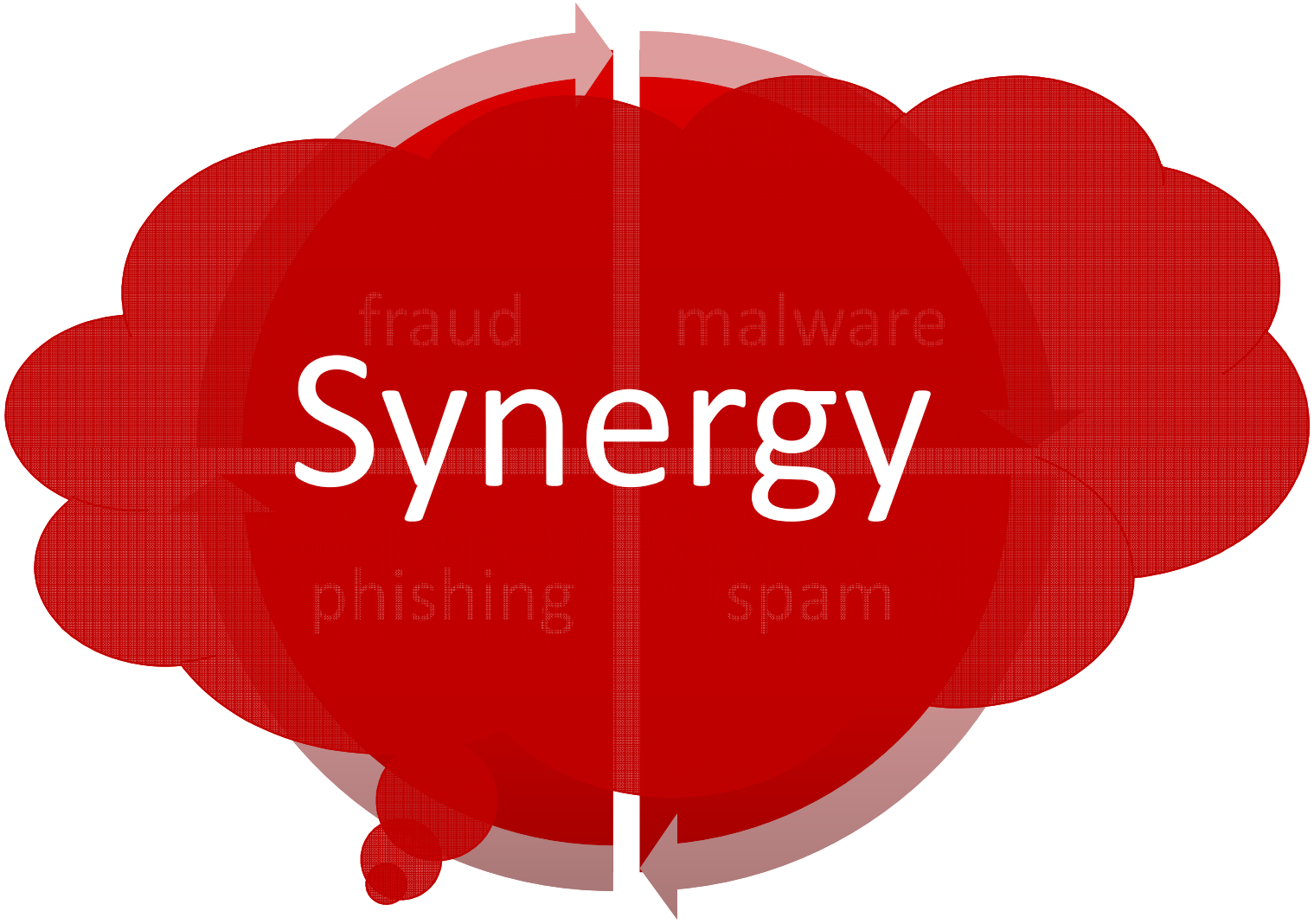
So What Does Exactly Cloud Offer Me?



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What Else Can Cloud Offer?

- Opens the door to a new set of
  - Applications
  - Devices
  - Operating systems

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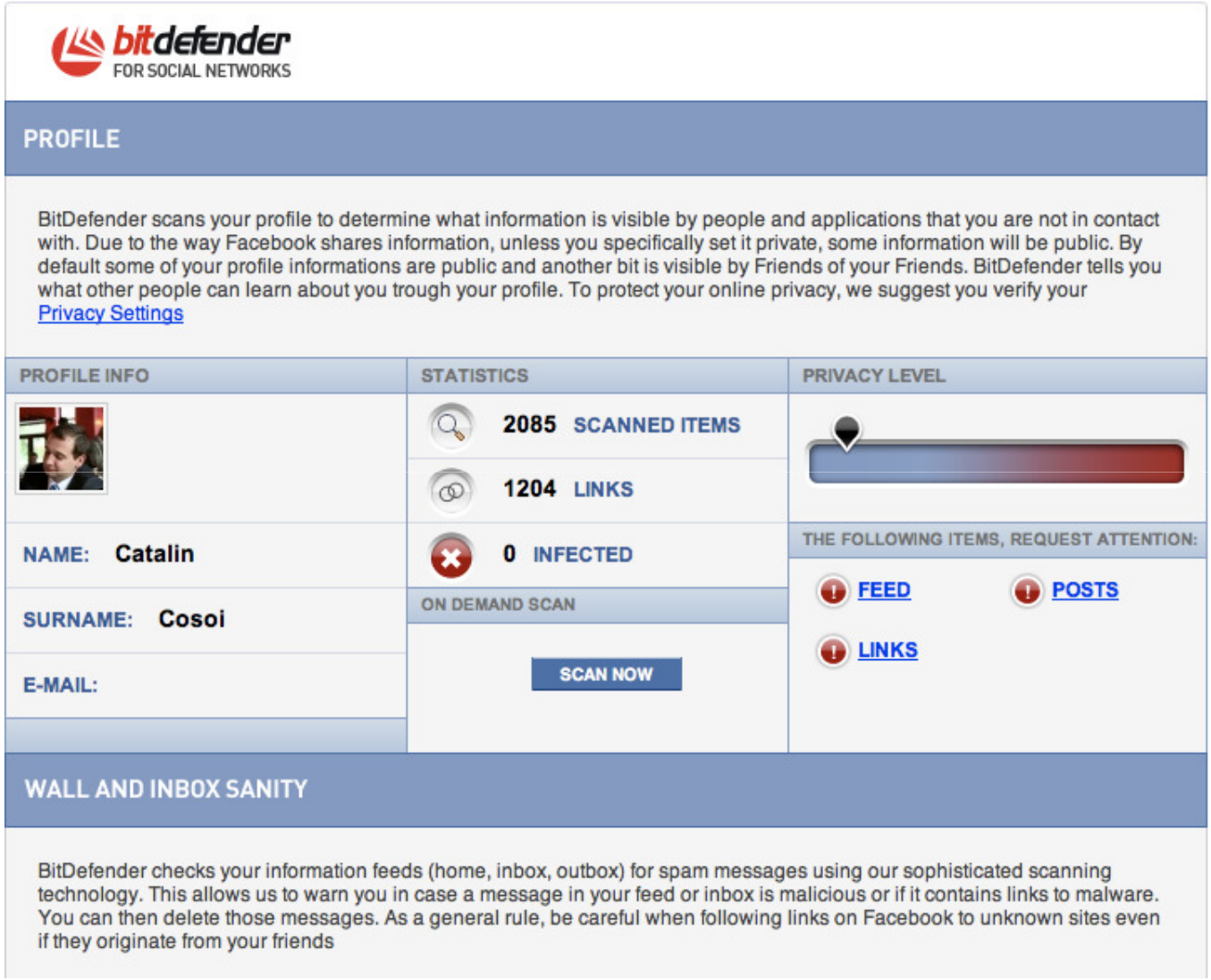
Provide Help For the Bloggers (WP Users and More)

Offer Support to Facebook Users



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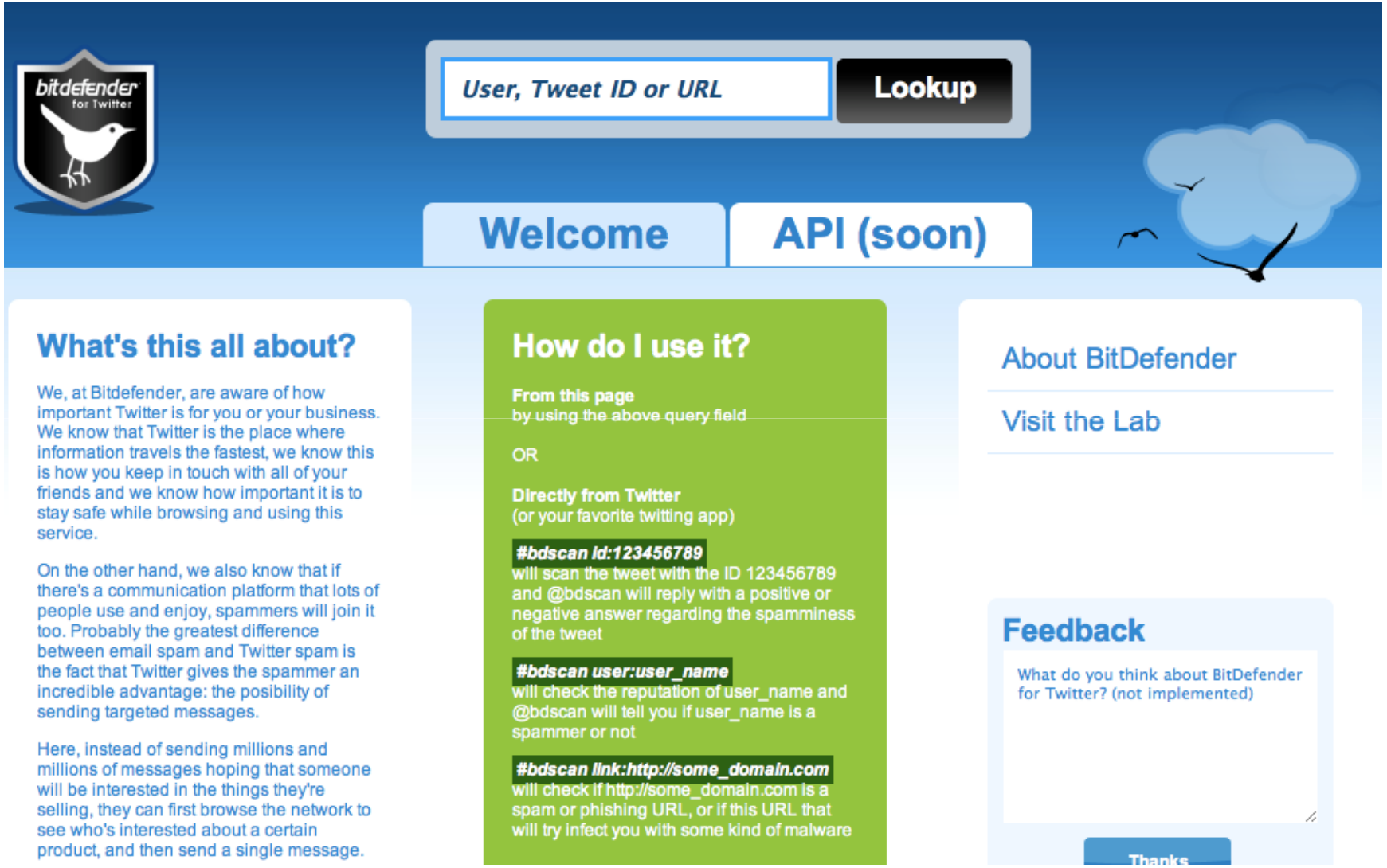
Assist Twitter Users



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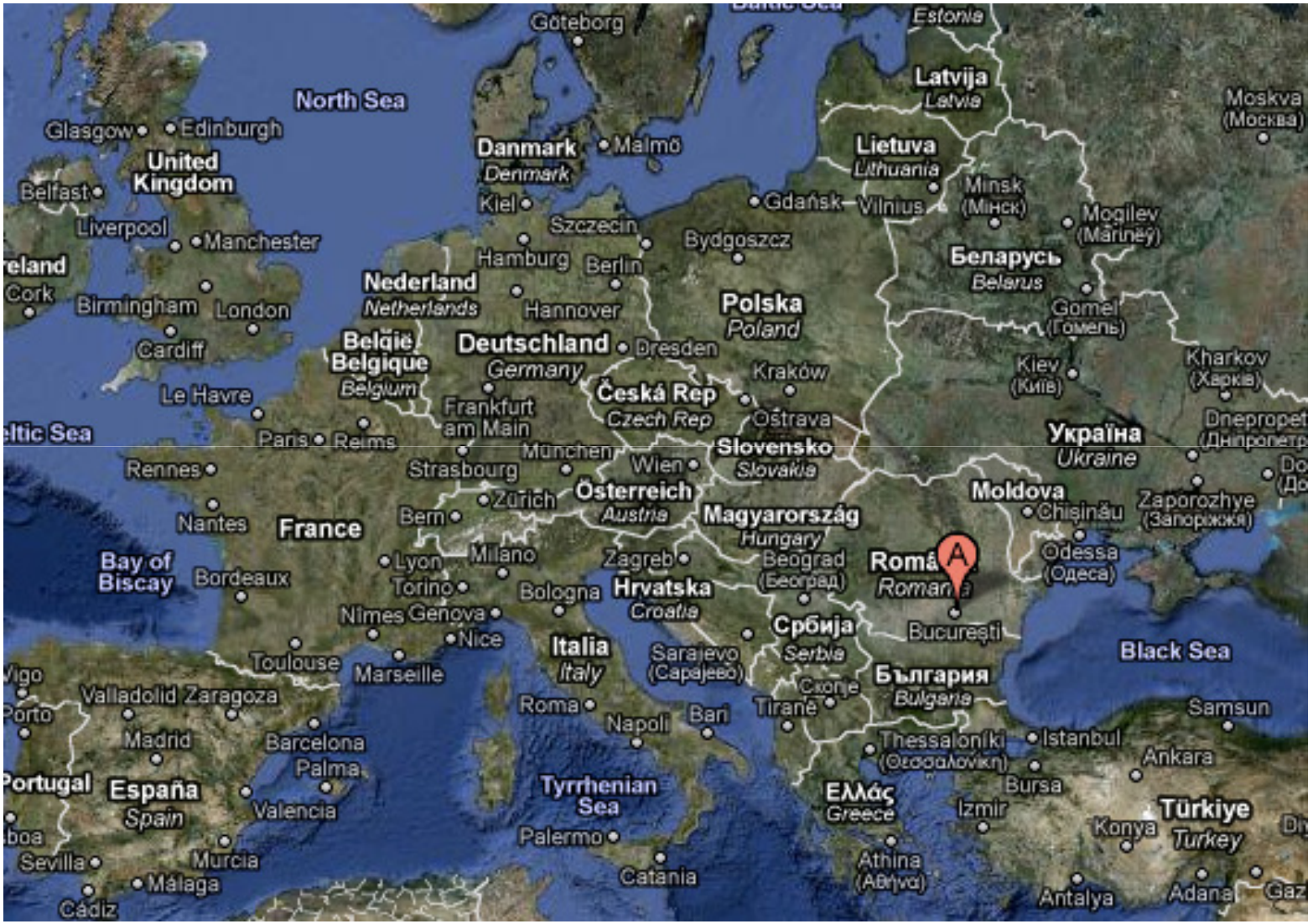
geoIP Based Attacks



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You Have to Login First!

- HTTPS webpages
- Sites where you have to login
- Sites that require user interaction

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Size Does Matter!

- Several sources of URLs means an extremely large number of URLs
- Several clients that query the cloud means a massive number of links that have to be analyzed
- Links have various statuses (clean, infected, phishing, fraud) which change dynamically
- So, one has to move fast…

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Lies, Damned Lies and Statistics

- Targeted attacks stay under the
- Slow spreading malware too

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Not Everyone Presses the “Like” Button

- Not everybody likes us
  - Website owners
  - ISPs
  - Maybe even social networks?
  - And hopefully the bad guys

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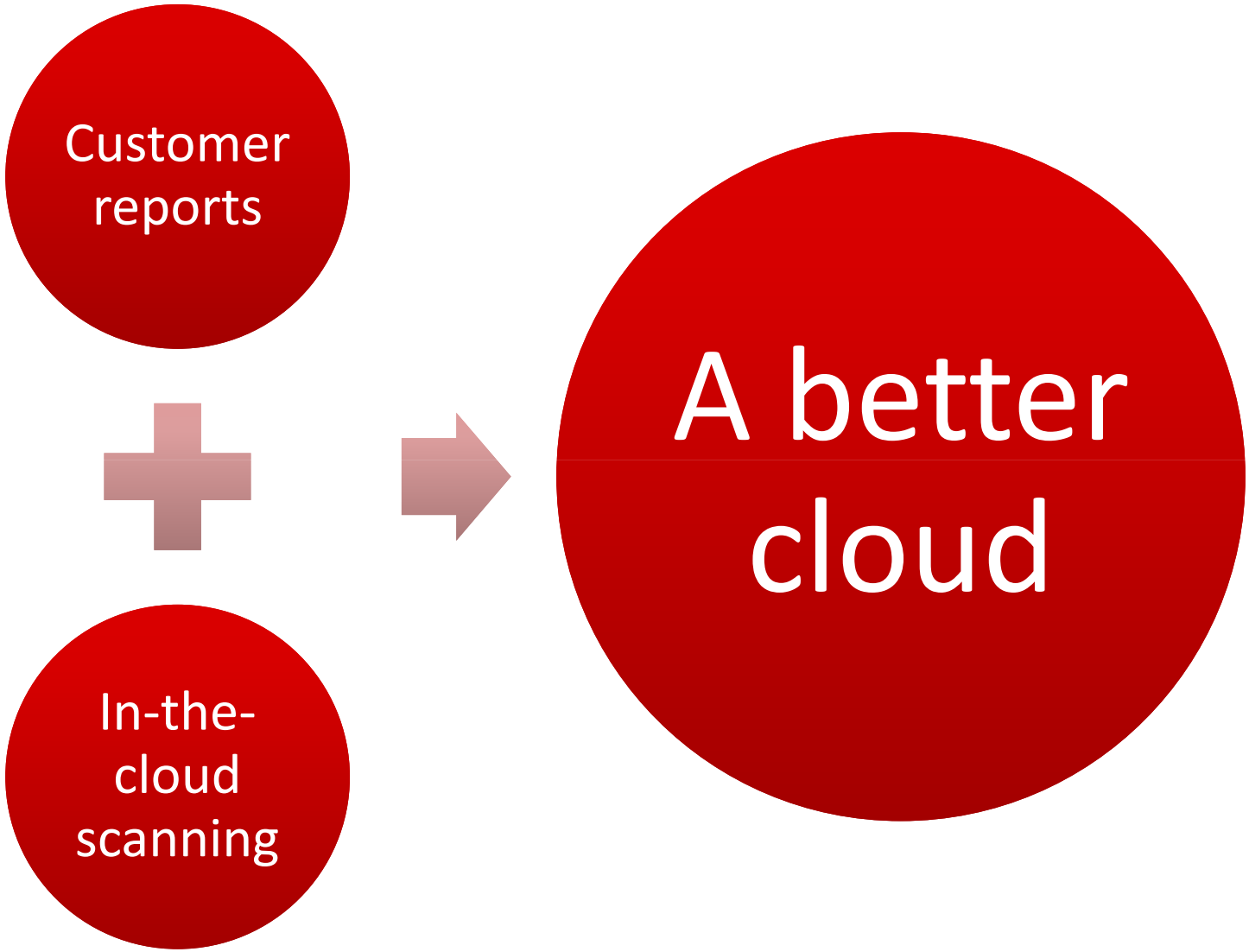
Enhancing the Cloud



Conclusions

- We believe that a hybrid approach is best
- The cloud should be used as another filtering method and not as a universal solution
- Not only there should be a hybrid approach, but also these techniques have to be interconnected
- Although it looks quite easy in theory, creating and maintaining a cloud architecture is not an easy process

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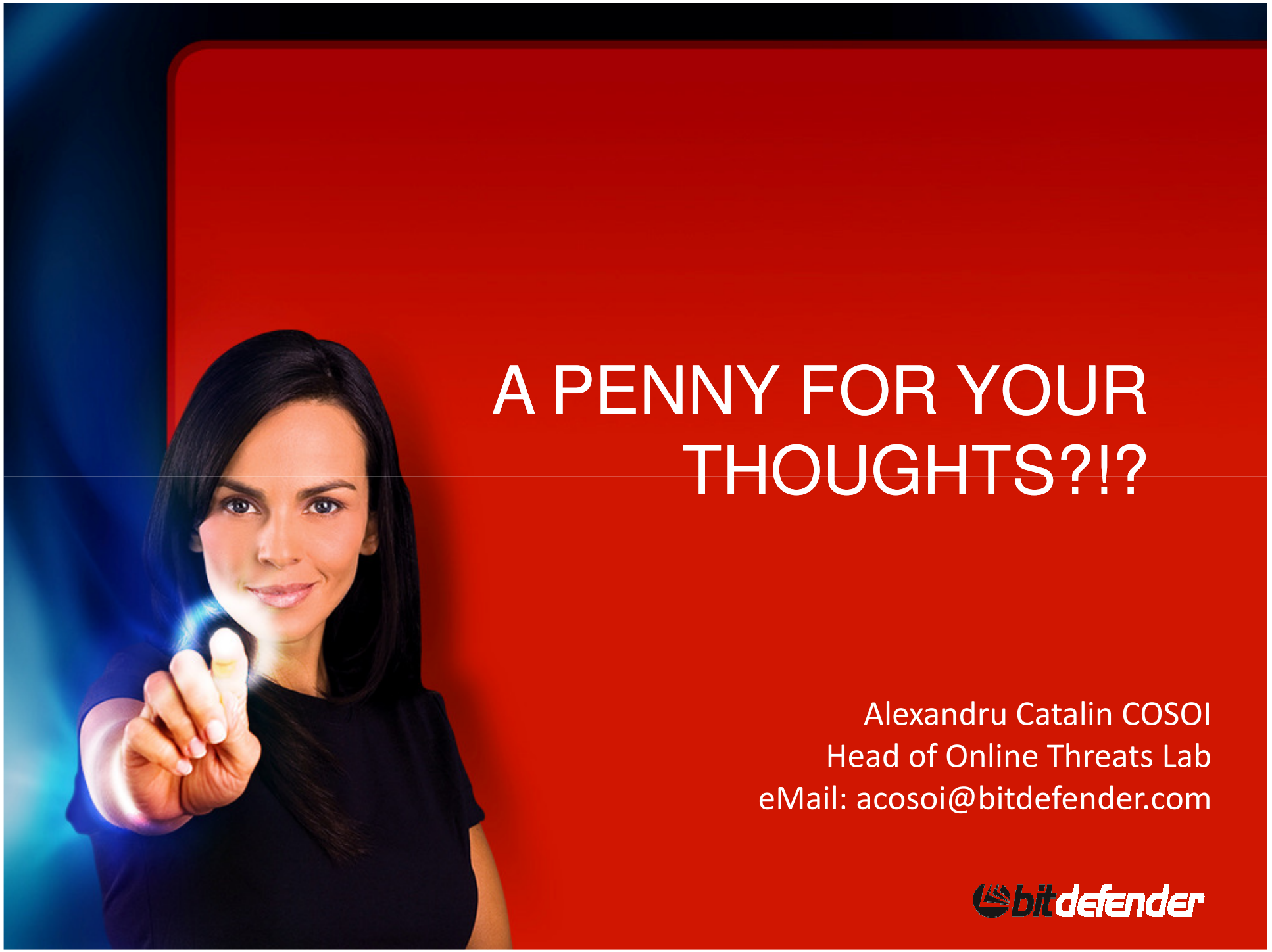

A PENNY FOR YOUR THOUGHTS?!?

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