Security Training For Everyone

FEBRUARY 2018

Rich Adams
Security & Incident Response


Gain insight into the threats we face,
and learn how to protect us from them.

"Best training I've ever been to. Rich is awesome! I should give him a promotion, a raise, and $100 from my own pocket right this instant!"

But seriously, all joking aside, this stuff is important. Please pay attention.

Arup Chakrabarti

Security Enthusiast

Also Rich's boss. Assuming Rich still has a job after this.

PUBLIC

*Slide **can be shared publicly** with family/friends, Twitter, etc.*

RESTRICTED

*Slide can only be shared with **customers under an NDA**.*

INTERNAL ONLY

*Slide is **not to be shared** with anyone outside of PagerDuty.*

PUBLIC

*Slide **can be sha** mily/friends, Twitter, etc.*

RESTRICTE

*Slide can or **s under an NDA**.*

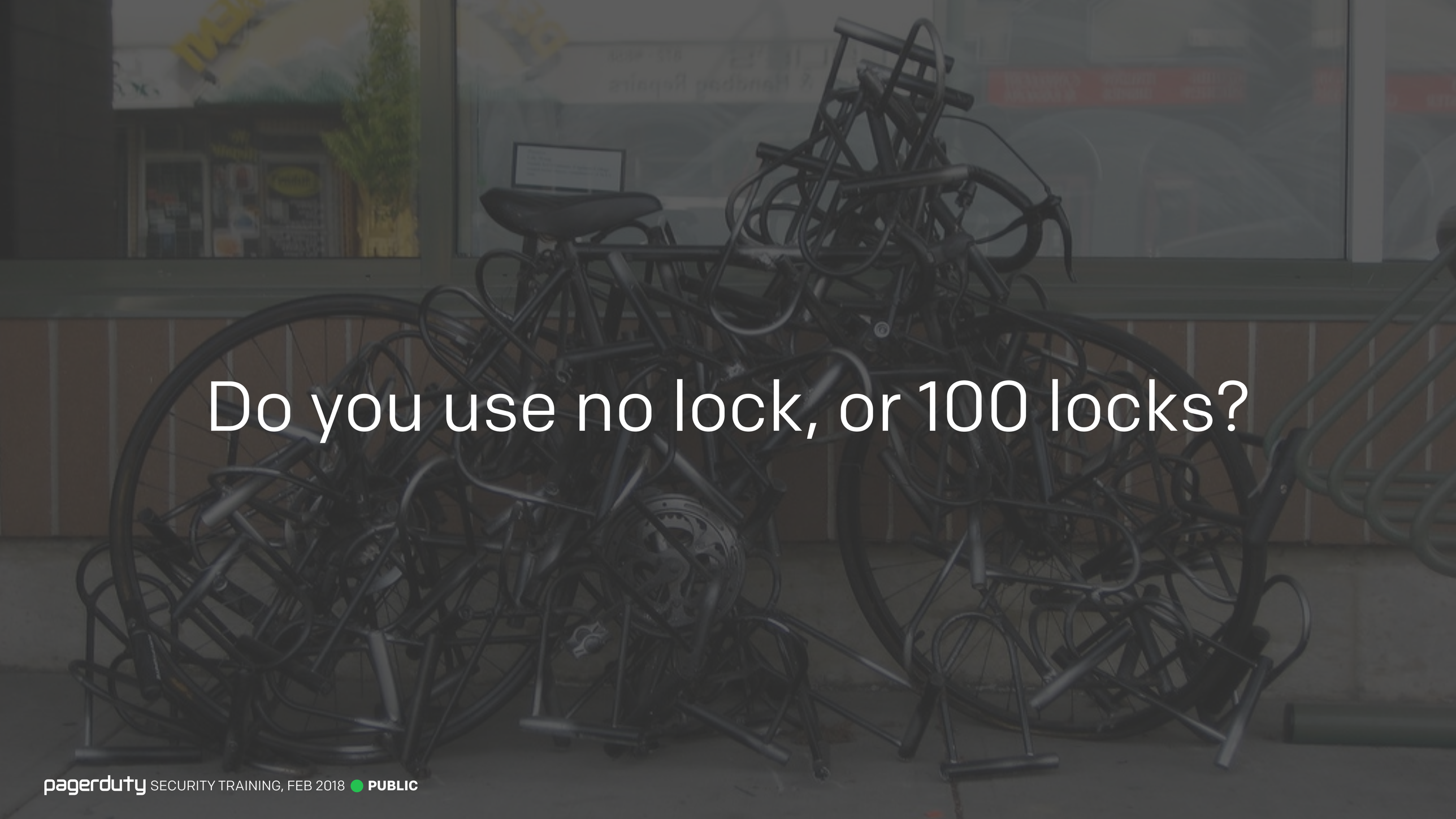
INTERNAL ON

*Slide is **not to be s** one outside of PagerDuty.*

[REDACTED]


Our job is to make it easy for you
to do the right thing.

BLUE


Do you use no lock, or 100 locks?

“Given the choice between security and convenience, people complain about security, but opt for convenience.”

Be Secure, But Usable

No Lies, No Pretending

"Faking security is the path to the dark side. Faking leads to false hope. False hope leads to false security. False security leads to suffering."

Totally real quote from Star Wars.

"Security theater is the practice of investing in countermeasures intended to provide the feeling of improved security while doing little or nothing to actually achieve it."

https://en.wikipedia.org/wiki/Security_theater

The Washington Post

About 14 million checked bags passed through TSA hands during the Thanksgiving holiday weekend.

The Washington Post

Security officers have master keys for TSA-approved baggage locks.

https://www.washingtonpost.com/local/trafficandcommuting/where-oh-where-did-my-luggage-go/

This repository Search Pull requests Issues Marketplace Explore

Xyl2k / **TSA-Travel-Sentry-master-keys**

Watch 172 Star 2,127 Fork 603

<> Code Issues 7 Pull requests 0 Projects 0 Wiki Insights

Branch: master **TSA-Travel-Sentry-master-keys** / **README.md** Find file Copy path

johnnyxmas Added Safe Skies Master Key 5635ddb on Jul 24, 2016

4 contributors

65 lines (36 sloc) 4.67 KB Raw Blame History

https://github.com/Xyl2k/TSA-Travel-Sentry-master-keys/

Social Engineering

"Psychological manipulation of people into performing actions or divulging confidential information."

https://en.wikipedia.org/wiki/Social_engineering_(security)

https://www.youtube.com/watch?v=iJIc16aqpO8

Building Trust

- Little bits of info can snowball.
- Attackers will claim to be a new employee to get info.
- Human nature is to want to help others.
- Confirm via another channel.

[REDACTED]

~~Fishing~~ Phishing

Lots of money for you!

Dear friend,

I am a Nigerian prince. I want to give you lots of money: $2,400,000

Just send me your bank account details, social security number, a photocopy of your passport, your birth certificate, and your first born child.

Free! Check if your credit card has been stolen!

If you fear your credit card info has been stolen, enter it here and you can find out for free. Avoiding fraud has never been easier!

About

Credit card number

Name on credit card

Expiration Date 01 / 2017

Check if my credit card is stolen

http://ismycreditcardstolen.com/

Debit Card
@NeedADebitCard

TWEETS 206 | FOLLOWERS 18K

Debit Card Retweeted

® @_rafae1_j · 15 Apr 2015

Found my Debit card. Thought I lost it 😅

https://twitter.com/needadebitcard

Reel or Fish?

~~Reel or Fish?~~
Real or Phish?

Your account has a debt and is past due

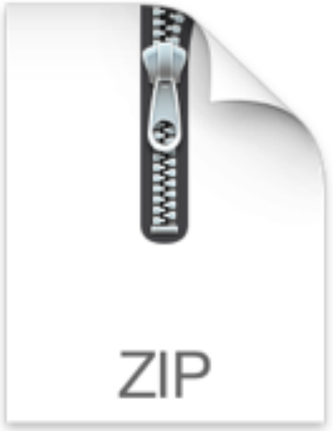
Letitia Madden To: jriley

12/16/15, 12:49 PM

Dear Customer,

Our records show that your account has a debt of $436.{rand(10,99)}. Previous attempts of collecting this sum have failed.

Down below you can find an attached file with the information on your case.



SCAN_INVOICE_33566292.zip

Your account has a debt and is past due

Letitia Madden

12/16/15, 12:49 PM

Sites will usually use your real name.
Rarely will it just be “Customer”.

Dear Customer,

Our records show that your account has a debt of $436.{rand(10,99)}. Previous attempts of collecting this sum have failed.

Attacker has left in some code.
Choosing random digit from 10-99.

Down below you can find an attached file with the information on your case

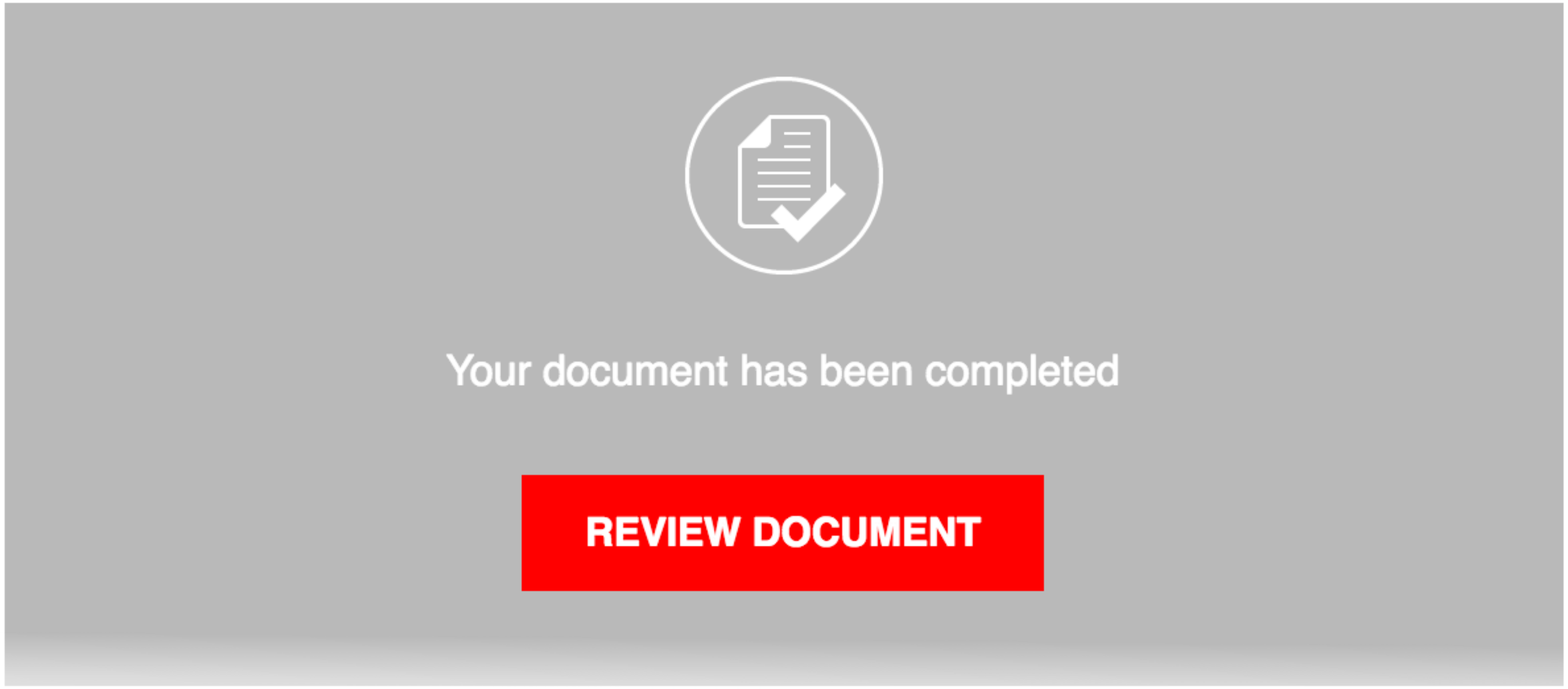
Beware of ZIP attachments.
Invoices would usually be PDF.

ZIP

SCAN_INVOICE_33566292.zip

Not to scale.

From: "Cameron Smith via DocuSign" <dse@docusgn.com>
Subject: Completed: pagerduty.com - Wire Transfer Instructions for **Document Ready for Signature**
Date: May 9, 2017 at 7:35:49 AM PDT
To: < @pagerduty.com>
Reply-To: "Cameron Smith via DocuSign" <dse@docusgn.com>



From: "Cameron Smith via DocuSign" <dse@docusgn.com>
Subject: Completed: pagerduty.com - Wire Transfer Instructions for Document Ready for Signature
Date: May 9, 2017 at 7:35:49 AM PDT
To: <@pagerduty.com>
Reply via DocuSign" <dse@docusgn.com>

Not the real docusign.com domain!

Hover over and see link goes to
http://.../file.php?email=....

ument has been completed

REVIEW DOCUMENT

[REDACTED]

Spear Phishing

For illustrative purposes only.
Real attacks may not contain spears, or fishes.

[REDACTED]

Protecting Yourself!

- Watch out for suspicious emails.
- “From:” addresses can be spoofed!
- To verify if from employee, ask them via IM or in person.
- If suspicious, forward the original email to us!

Security training is great! Inbox x

Rich Adams <rich@pagerduty.com> 3:11 PM (0 minutes ago)

to me

Hi PagerDuty Employee,

Security training is really awesome. If you agree, you should click this link,

http://totally-legit.ru/get-password.php?id=aab4625d7ac6472

Regards,
Rich

Click here to Reply or Forward

Security training is great! Inbox x

Rich Adams <rich@pagerduty.com> 3:11 PM (1 minute ago)

to me

Hi PagerDuty Employee,

Security training is really awesome. If you agree, you should click this link,

http://totally-legit.ru/get-password.php?id=aab4625d7ac6472

Regards,
Rich

Reply
Forward
Filter messages like this
Print
Delete this message
Report spam
Report phishing
Show original
Translate message
Mark as unread

Click here to Reply or Forward

We need to get the original message with all headers.

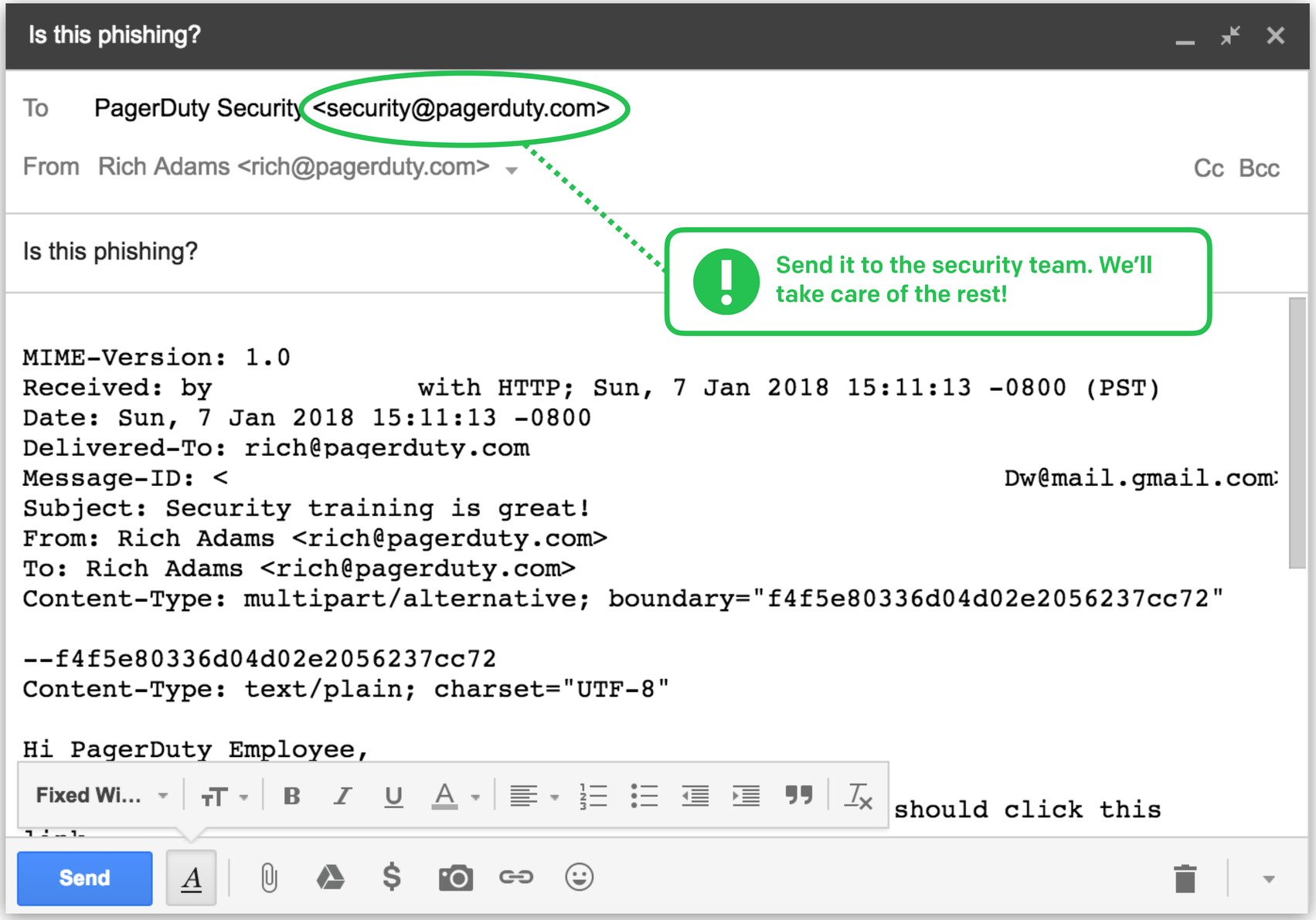
Original Message

Message ID	< Dw@mail.gmail.com>
Created at:	Sun, Jan 7, 2018 at 3:11 PM (Delivered after 0 seconds)
From:	Rich Adams <rich@pagerduty.com>
To:	Rich Adams <rich@pagerdut
Subject:	Security training is great!

Click this to get all the info we need in your clipboard.

Download Original

Copy to clipboard


Is this phishing?
To PagerDuty Security <security@pagerduty.com>
From Rich Adams <rich@pagerduty.com>
Cc Bcc
Is this phishing?
Send it to the security team. We'll take care of the rest!
MIME-Version: 1.0
Received: by with HTTP; Sun, 7 Jan 2018 15:11:13 -0800 (PST)
Date: Sun, 7 Jan 2018 15:11:13 -0800
Delivered-To: rich@pagerduty.com
Message-ID: <
Dw@mail.gmail.com>
Subject: Security training is great!
From: Rich Adams <rich@pagerduty.com>
To: Rich Adams <rich@pagerduty.com>
Content-Type: multipart/alternative; boundary="f4f5e80336d04d02e2056237cc72"
--f4f5e80336d04d02e2056237cc72
Content-Type: text/plain; charset="UTF-8"
Hi PagerDuty Employee,
Fixed Wi...
should click this
Send

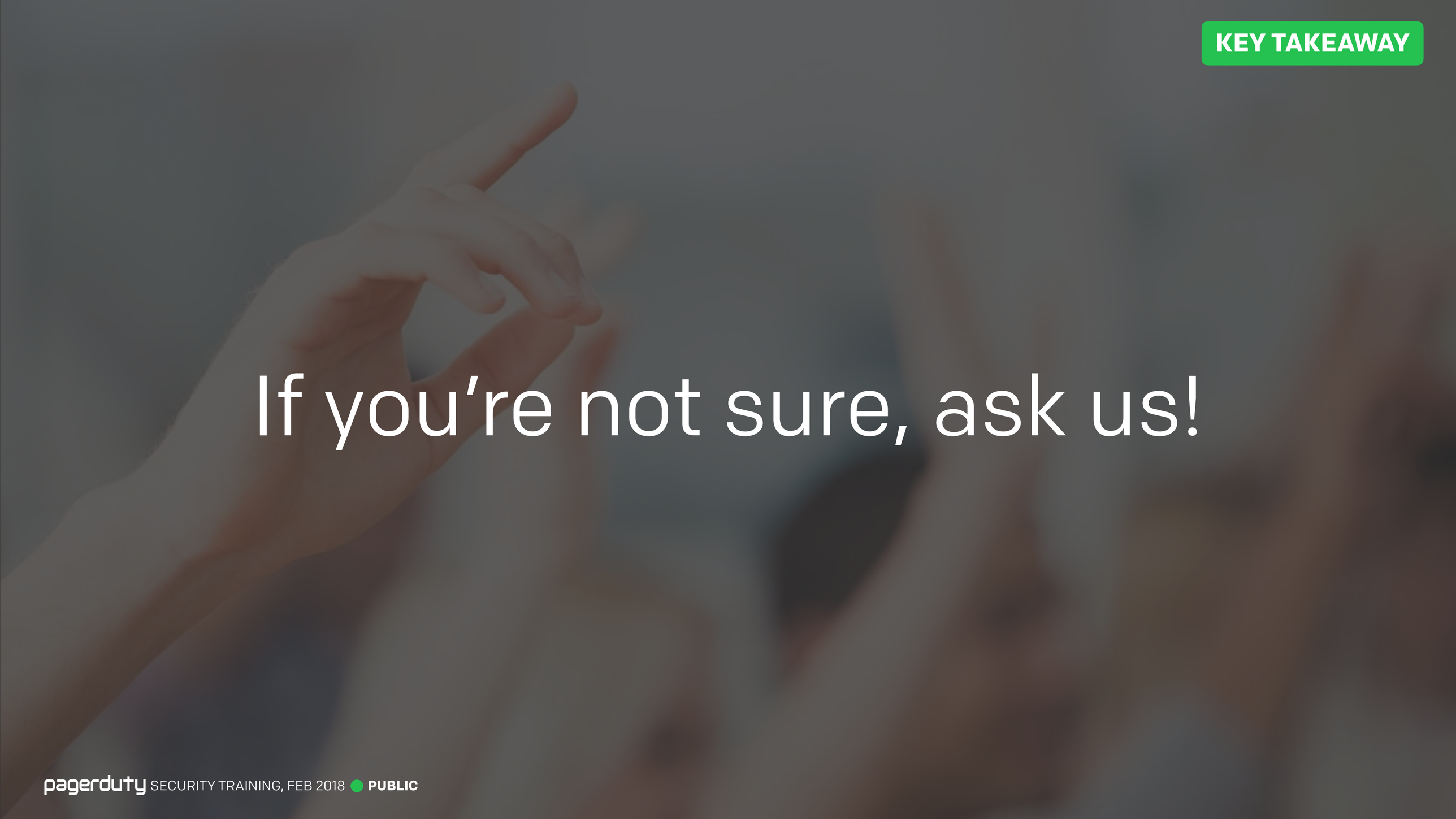
YOU are our greatest asset in the fight against phishing!

Seriously! We've preemptively blocked several phishing attacks thanks to employee reports.

Not Just Phishing

- Pretexting.
- Baiting.
- Quid Pro Quo.

https://en.wikipedia.org/wiki/Social_engineering_(security)#Techniques_and_terms

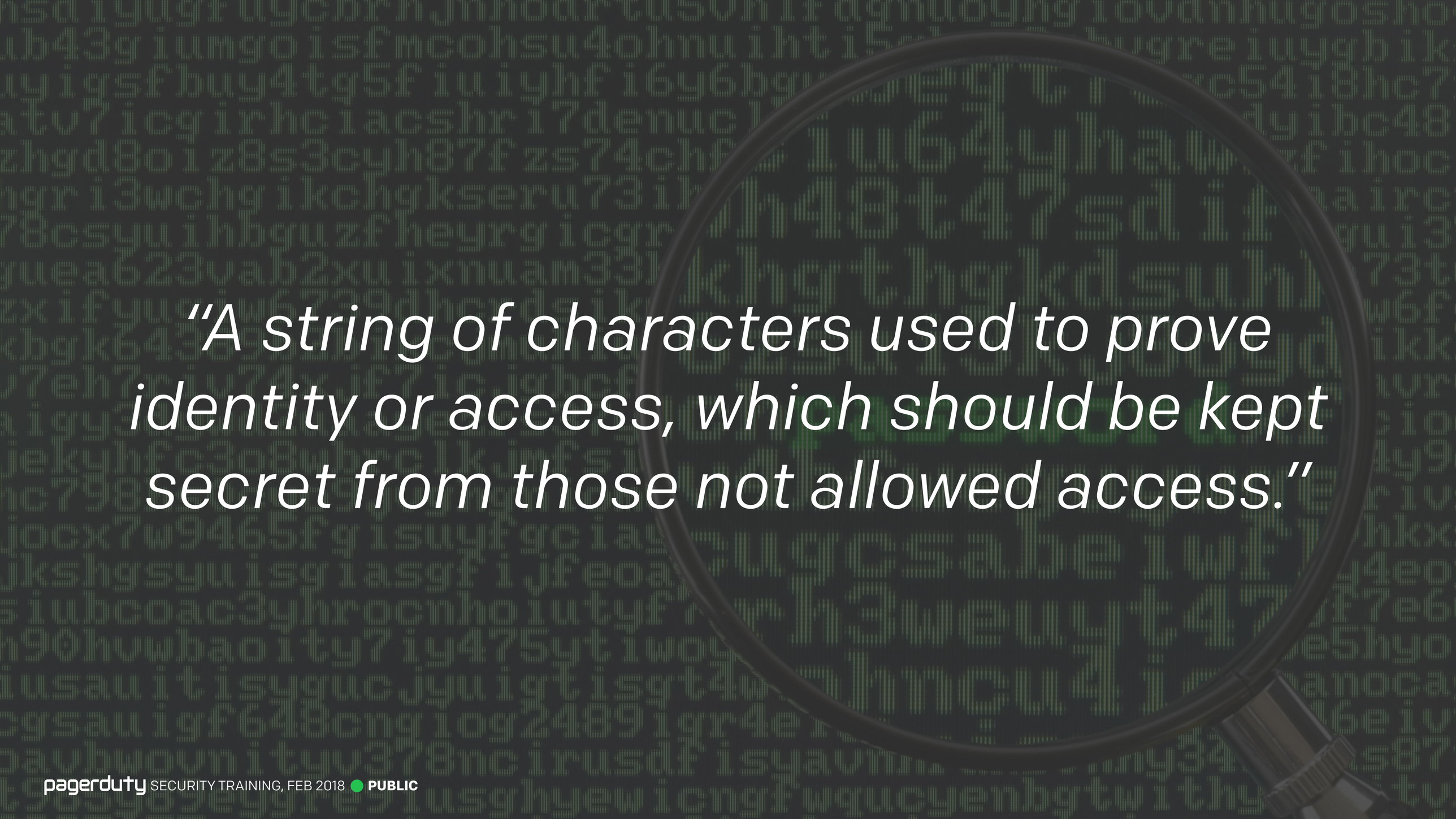


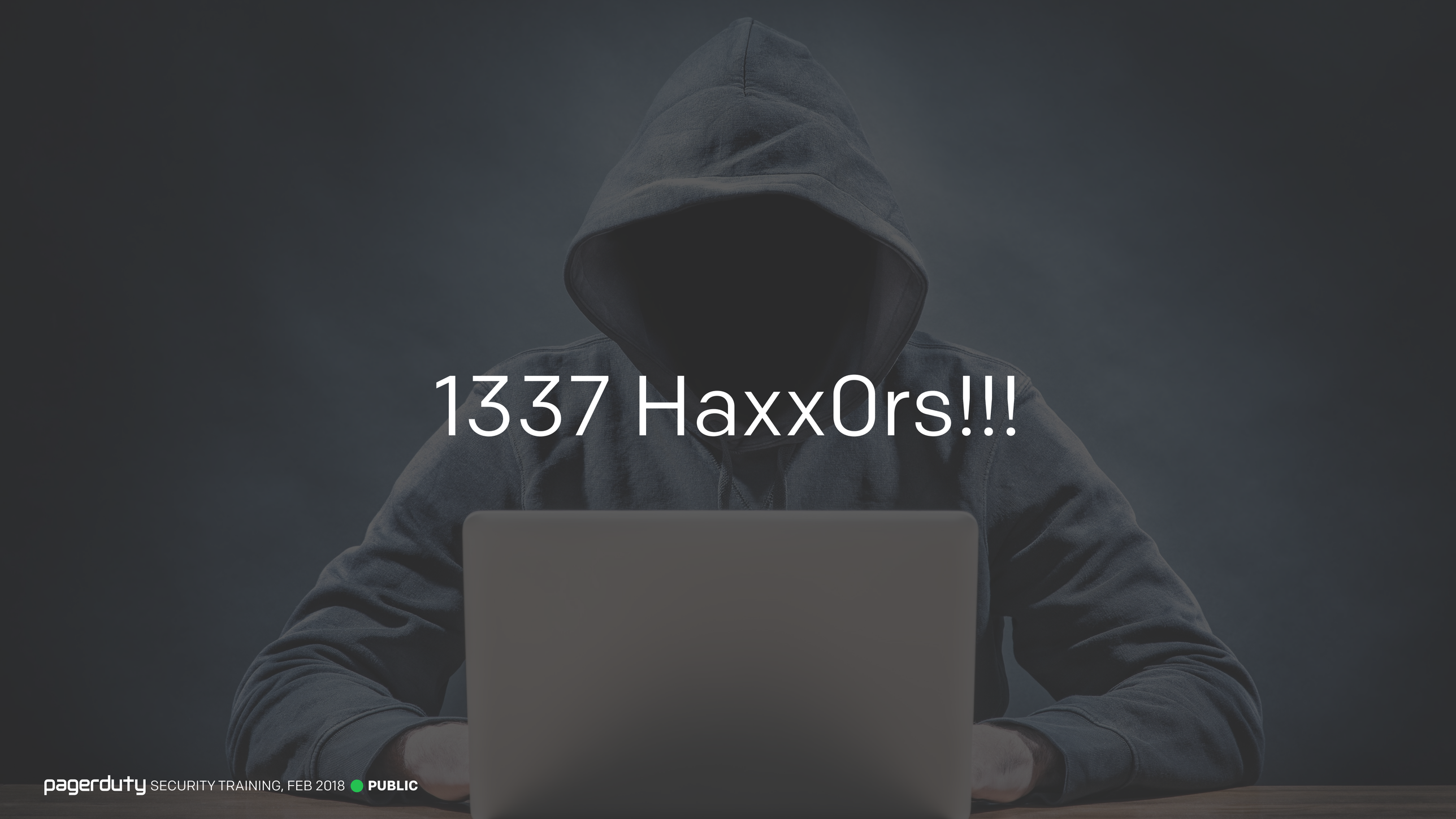
KEY TAKEAWAY

If you're not sure, ask us!

Passwords


Sorry but your password must contain an uppercase letter, a number, a haiku, a gang sign, a hieroglyph, and the blood of a virgin.
APPARENTLY YOU CAN'T USE "BEEF STEW" AS A PASSWORD. IT'S NOT STROGANOFF
Change Password
Your password must be at least 18770 characters and cannot repeat any of your previous 30689 passwords. Please type a different password. Type a password that meets these requirements in both text boxes.
OK


“A string of characters used to prove identity or access, which should be kept secret from those not allowed access.”


1337 HaxxOrs!!!

Hashing

https://en.wikipedia.org/wiki/Cryptographic_hash_function

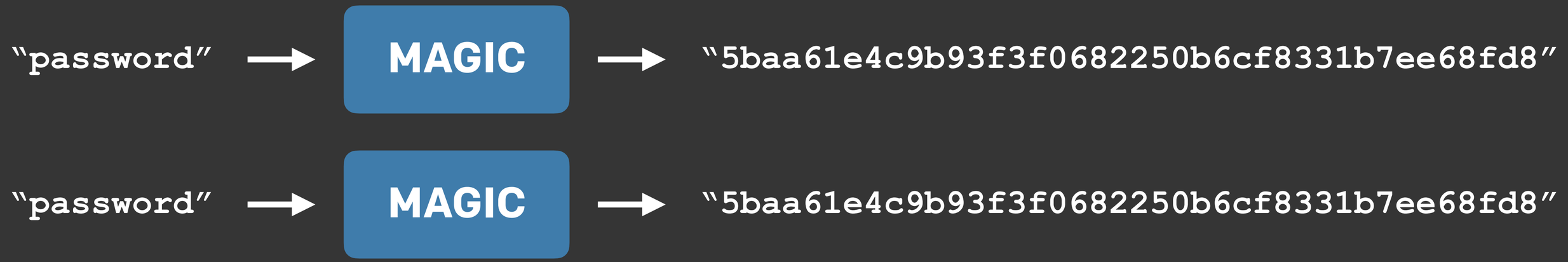
Hashing

https://en.wikipedia.org/wiki/Cryptographic_hash_function

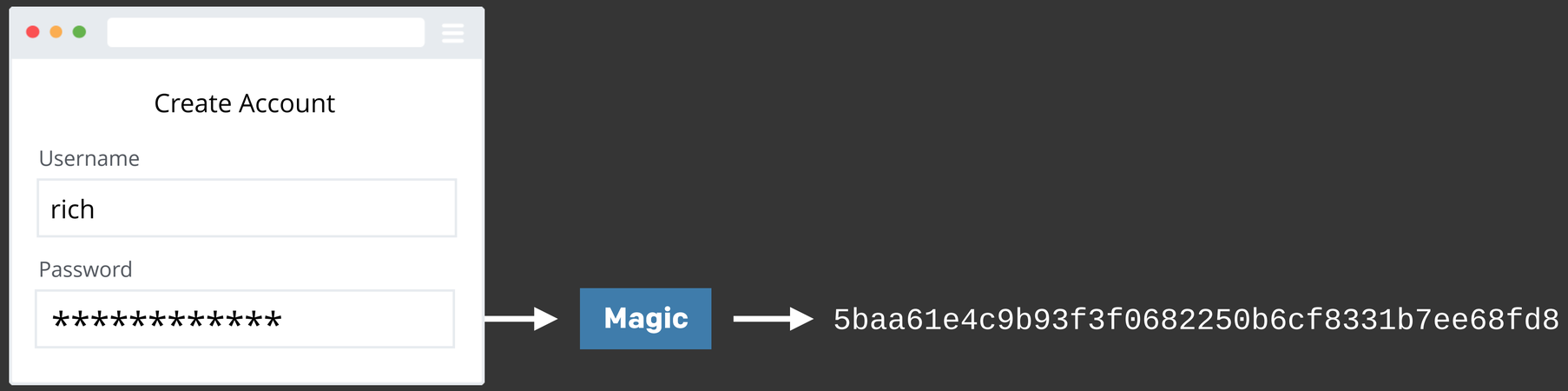
Magic

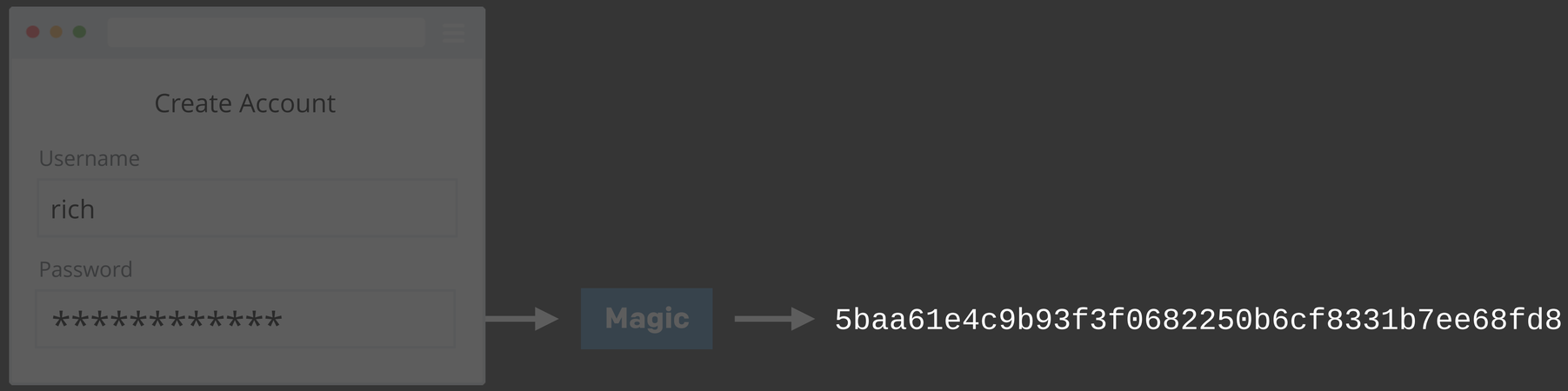

“password”
MAGIC
“5baa61e4c9b93f3f0682250b6cf8331b7ee68fd8”

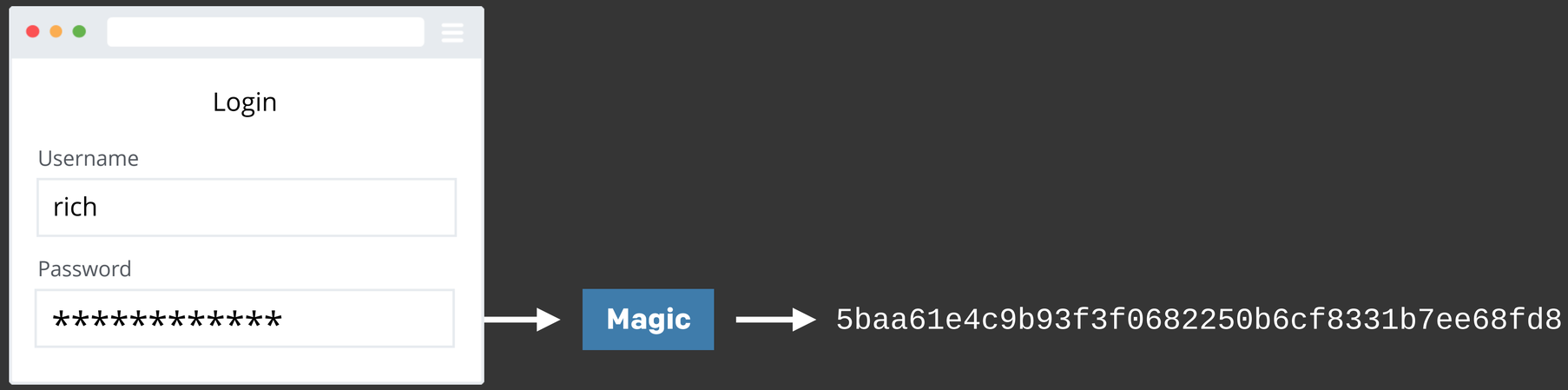
Repeatable

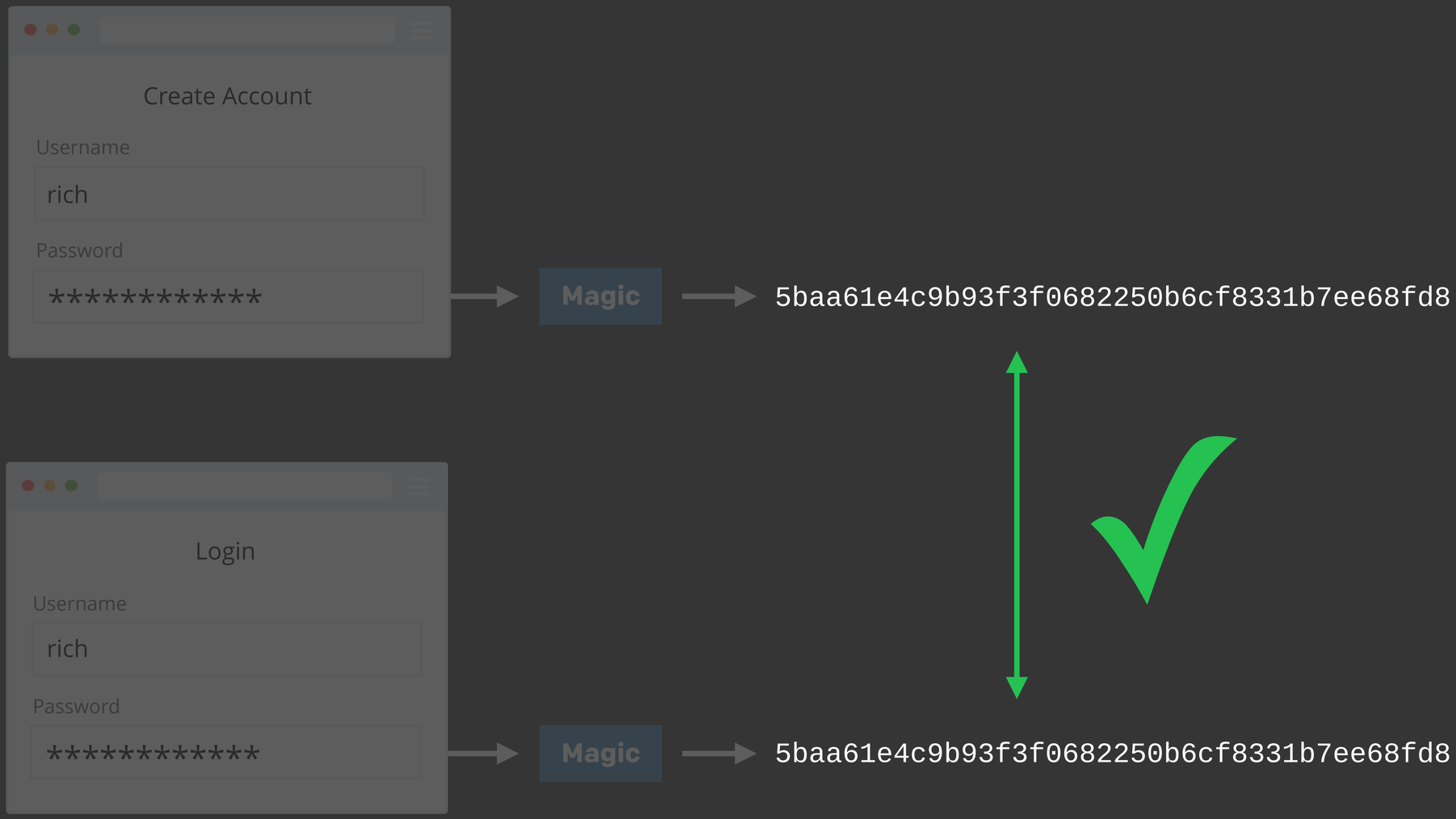

"password"
MAGIC
"5baa61e4c9b93f3f0682250b6cf8331b7ee68fd8"
"password"
MAGIC
"5baa61e4c9b93f3f0682250b6cf8331b7ee68fd8"

Irreversible


Create Account
Username
rich
Password
****
Magic
5baa61e4c9b93f3f0682250b6cf8331b7ee68fd8


Create Account
Username
rich
Password
****
Magic
5baa61e4c9b93f3f0682250b6cf8331b7ee68fd8


Login
Username
rich
Password
****
Magic
5baa61e4c9b93f3f0682250b6cf8331b7ee68fd8


Create Account
Username
rich
Password
****
Magic
5baa61e4c9b93f3f0682250b6cf8331b7ee68fd8
Login
Username
rich
Password
****
Magic
5baa61e4c9b93f3f0682250b6cf8331b7ee68fd8

Evil Corp™ Customer Database

id	username	password_hash	password_hint
1	admin	77ba9cd915c8e359d9733edcfe9c61e5aca92afb	NULL
2	rich	410114109270c8ffe4af1706adcad6e29c421f4d	fav person
3	sarah	34ea99829a8df97f54dddc3c747c13c6b34c2a93	NULL
4	james	410114109270c8ffe4af1706adcad6e29c421f4d	Freddie Mercury’s band
5	arup	d9bc17fe6fdf4909187612e5374b74a7d593975e	scary movie
6	allison	7c4a8d09ca3762af61e59520943dc26494f8941b	NULL
7	pumpkin22	d9bc17fe6fdf4909187612e5374b74a7d593975e	fav holiday

Evil Corp™ Customer Database

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4	james	410114109270c8ffe4af1706adcad6e29c421f4d	Freddie Mercury's band
5	arup	d9bc17fe6fdf4909187612e5374b74a7d593975e	scary movie
6	allison	7c4a8d09ca3762af61e59520943dc26494f8941b	NULL
7	pumpkin22	d9bc17fe6fdf4909187612e5374b74a7d593975e	fav holiday

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4	james	410114109270c8ffe4af1706adcad6e29c421f4d	Freddie Mercury's band
5	arup	d9bc17fe6fdf4909187612e5374b74a7d593975e	scary movie
6	allison	7c4a8d09ca3762af61e59520943dc26494f8941b	NULL
7	pumpkin22	d9bc17fe6fdf4909187612e5374b74a7d593975e	fav holiday

Evil Corp™ Customer Database

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2	rich	410114109270c8ffe4af1706adcad6e29c421f4d	fav person
3	sarah	34ea99829a8df97f54dddc3c747c13c6b34c2a93	NULL
4	james	410114109270c8ffe4af1706adcad6e29c421f4d	Freddie Mercury's band
5	arup	**halloween**	scary movie
6	allison	7c4a8d09ca3762af61e59520943dc26494f8941b	NULL
7	pumpkin22	**halloween**	fav holiday

Evil Corp™ Customer Database

id	username	password_hash	password_hint
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2	rich	410114109270c8ffe4af1706adcad6e29c421f4d	fav person
3	sarah	34ea99829a8df97f54dddc3c747c13c6b34c2a93	NULL
4	james	410114109270c8ffe4af1706adcad6e29c421f4d	Freddie Mercury’s band
5	arup	halloween	scary movie
6	allison	7c4a8d09ca3762af61e59520943dc26494f8941b	NULL
7	pumpkin22	halloween	fav holiday

Evil Corp™ Customer Database

id	username	password_hash	password_hint
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2	rich	410114109270c8ffe4af1706adcad6e29c421f4d	fav person
3	sarah	34ea99829a8df97f54dddc3c747c13c6b34c2a93	NULL
4	james	410114109270c8ffe4af1706adcad6e29c421f4d	Freddie Mercury's band
5	arup	halloween	scary movie
6	allison	7c4a8d09ca3762af61e59520943dc26494f8941b	NULL
7	pumpkin22	halloween	fav holiday

Evil Corp™ Customer Database

id	username	password_hash	password_hint
1	admin	77ba9cd915c8e359d9733edcfe9c61e5aca92afb	NULL
2	rich	queen	fav person
3	sarah	34ea99829a8df97f54dddc3c747c13c6b34c2a93	NULL
4	james	queen	Freddie Mercury’s band
5	arup	halloween	scary movie
6	allison	7c4a8d09ca3762af61e59520943dc26494f8941b	NULL
7	pumpkin22	halloween	fav holiday

Evil Corp™ Customer Database

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2	rich	queen	fav person
3	sarah	34ea99829a8df97f54dddc3c747c13c6b34c2a93	NULL
4	james	queen	Freddie Mercury’s band
5	arup	halloween	scary movie
6	allison	7c4a8d09ca3762af61e59520943dc26494f8941b	NULL
7	pumpkin22	halloween	fav holiday


"1"
MAGIC
"356a192b7913b04c54574d18c28d46e6395428ab"
"2"
MAGIC
"da4b9237bacccdf19c0760cab7aec4a8359010b0"
"3"
MAGIC
"77de68daecd823babbb58edb1c8e14d7106e83bb"
"4"
MAGIC
"1b6453892473a467d07372d45eb05abc2031647a"
"5"
MAGIC
"ac3478d69a3c81fa62e60f5c3696165a4e5e6ac4"

RUBY

```ruby
require 'digest/sha1'

(1..1000000).each do |n|
  sha1 = Digest::SHA1.hexdigest n.to_s
  puts "#{sha1} = #{n}"
end
```

Evil Corp™ Customer Database

id	username	password_hash	password_hint
1	admin	1337	NULL
2	rich	queen	fav person
3	sarah	34ea99829a8df97f54dddc3c747c13c6b34c2a93	NULL
4	james	queen	Freddie Mercury’s band
5	arup	halloween	scary movie
6	allison	123456	NULL
7	pumpkin22	halloween	fav holiday

Evil Corp™ Customer Database

id	username	password_hash	password_hint
1	admin	1337	NULL
2	rich	queen	fav person
3	sarah	34ea99829a8df97f54dddc3c747c13c6b34c2a93	NULL
4	james	queen	Freddie Mercury’s band
5	arup	halloween	scary movie
6	allison	123456	NULL
7	pumpkin22	halloween	fav holiday


"a"
MAGIC
"86f7e437faa5a7fce15d1ddcb9eaeaea377667b8"
"aal"
MAGIC
"e61e506ca0fd8251f850bc313f709cc07cbcecf2"
"aalil"
MAGIC
"f60f98341248eca0d2270cb0145d4d17f818366c"
"aardvark"
MAGIC
"ff49abca9701606b01b6245d587d26c31b63a433"
"aardwolf"
MAGIC
"661e46b960572398e02f82878e2dfeadb4518899"

Evil Corp™ Customer Database

id	username	password_hash	password_hint
1	admin	1337	NULL
2	rich	queen	fav person
3	sarah	34ea99829a8df97f54dddc3c747c13c6b34c2a93	NULL
4	james	queen	Freddie Mercury’s band
5	arup	halloween	scary movie
6	allison	123456	NULL
7	pumpkin22	halloween	fav holiday


Trying everything will take too long.

Rainbow Tables Magic Lists

SHA1 Magic Lists

Table ID	Charset	Plaintext Length	Key Space	Success Rate	Table Size	Files	Performance
sha1_ascii-32-95#1-7	ascii-32-95	1 to 7	70,576,641,626,495	99.9 %	52 GB 64 GB	Perfect Non-perfect	Perfect Non-perfect
sha1_ascii-32-95#1-8	ascii-32-95	1 to 8	6,704,780,954,517,120	96.8 %	460 GB 576 GB	Perfect Non-perfect	Perfect Non-perfect
sha1_mixalpha-numeric#1-8	mixalpha-numeric	1 to 8	221,919,451,578,090	99.9 %	127 GB 160 GB	Perfect Non-perfect	Perfect Non-perfect
sha1_mixalpha-numeric#1-9	mixalpha-numeric	1 to 9	13,759,005,997,841,642	96.8 %	690 GB 864 GB	Perfect Non-perfect	Perfect Non-perfect
sha1_loweralpha-numeric#1-9	loweralpha-numeric	1 to 9	104,461,669,716,084	99.9 %	65 GB 80 GB	Perfect Non-perfect	Perfect Non-perfect
sha1_loweralpha-numeric#1-10	loweralpha-numeric	1 to 10	3,760,620,109,779,060	96.8 %	316 GB 396 GB	Perfect Non-perfect	Perfect Non-perfect

http://project-rainbowcrack.com/table.htm

Evil Corp™ Customer Database

id	username	password_hash	password_hint
1	admin	1337	NULL
2	rich	queen	fav person
3	sarah	gLCbYt9MX	NULL
4	james	queen	Freddie Mercury’s band
5	arup	halloween	scary movie
6	allison	123456	NULL
7	pumpkin22	halloween	fav holiday

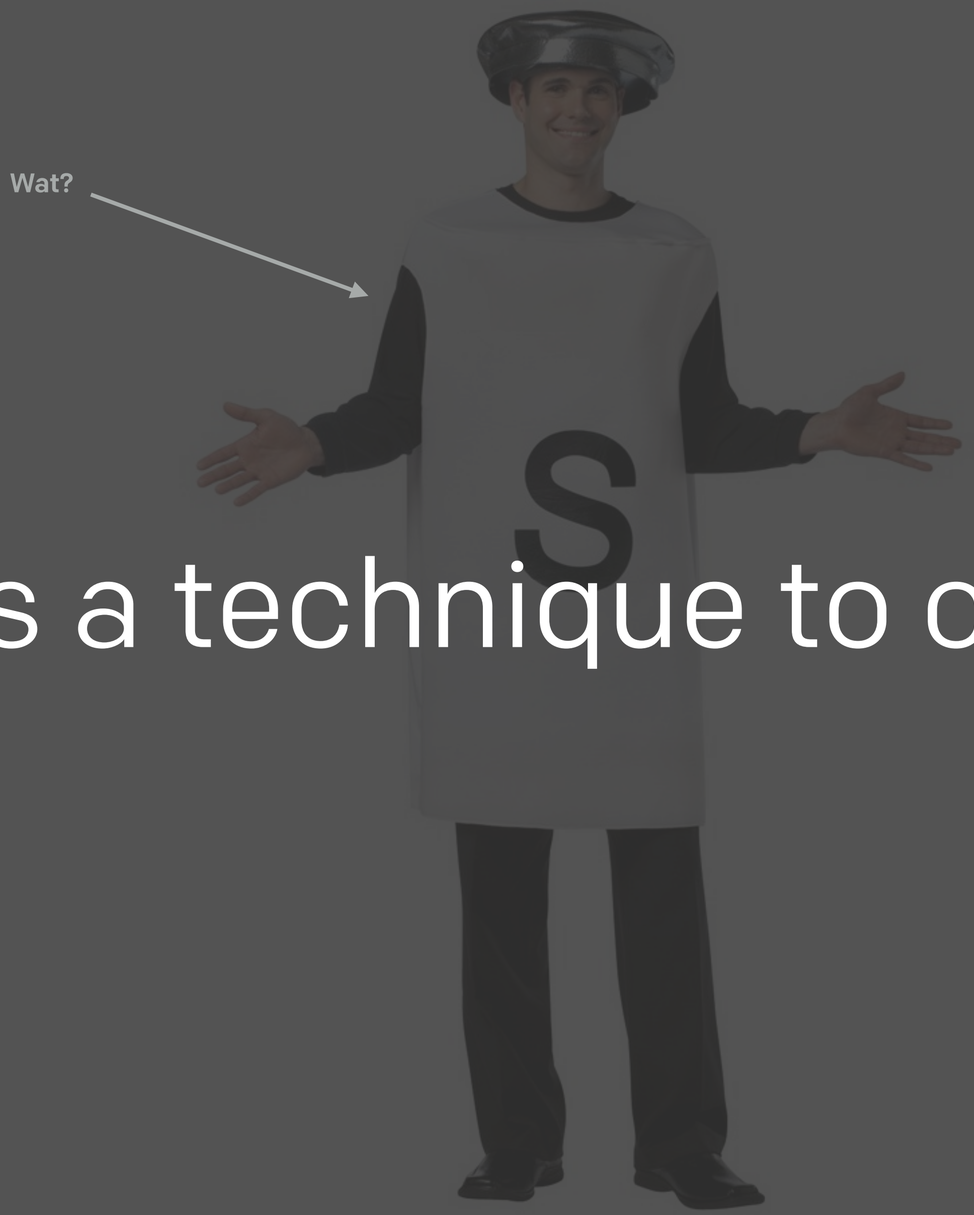
gLCbYt9MX

Lowercase letters.

Uppercase letters.

Numbers.

Special characters.



Salting is a technique to combat this.

Password Leaks

- LinkedIn (2012) - **Unsalted SHA-1**
- Evernote (2013) - **Unsalted MD5**
- Last.fm (2012) - **Unsalted MD5**
- eHarmony (2012) - **Unsalted MD5**
- Yahoo (2013) - **MD5**

WTF!?! (Not joking, they have it in their FAQ!)

http://www.informationisbeautiful.net/visualizations/worlds-biggest-data-breaches-hacks/

```
1. .com:muRRay000
2. tmail.com:swordfish91
3. com:j7dokmg1
4. ett@gmail.com:lew0rthy
5. o.com:123890vh
6. @yahoo.com:spot123
7. .com:Kitty12
8. ol.com:appleyapps19308
9. gmail.com:poopoo1
10. d12@live.com:kylie2380
11. n@gmail.com:stark1701
12. ow@yahoo.com:m0nkey123
13. l.com:youdontno1
14. b.de:teddy2003
15. ail.com:mrTree9
16. ahoo.com:skellah1
17. l.com:orangeto2
18. tmail.com:omg777999
19. 88@gmail.com:hacker2233
20. ail.com:ibmx41trocks
```

https://hotforsecurity.bitdefender.com/blog/1800-minecraft-usernames-and-passwords-leak-online-11209.html

Best Practices

- Long (15+ chars).
- Random.
- Unique.
- Private.

Long

- Longer = Harder to break (mostly).
- Break 8 characters in less than a day*.
- DoD Standards say 15+ chars.
- You should use 50+ if you can.

? https://www.thesecurityfactory.be/password-cracking-speed/

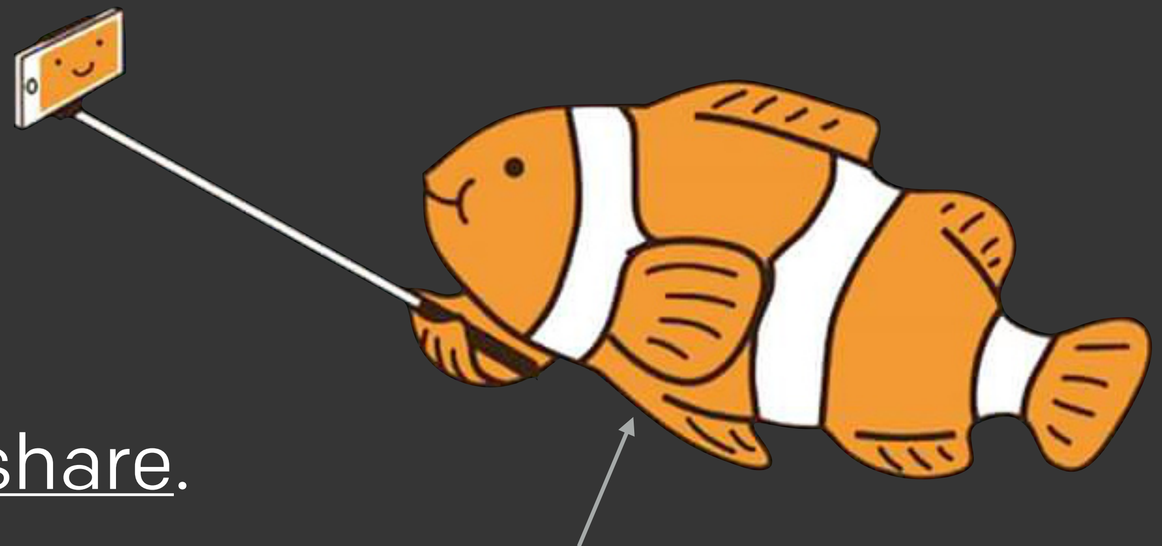
Random

- Don’t use “dictionary” words.
- Completely random. Humans are bad at random.
- Most complex you can make it given rules of website.

Unique

- Don’t follow patterns.
- Different password for every single account.
- Can’t assume websites store your password properly.
- If you use same one everywhere, everywhere is vulnerable.

Private

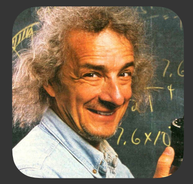


Selfish.. get it? Cos it's a fish, taking a selfie.
Hello? Is this thing on?

- They're yours. Be selfish. Never share.
- Don't send over "insecure channels":
  - i.e. Email, IM, Facebook, Slack, etc.
- We'll never ask you for your password.

“Treat your password like your toothbrush. Don't let anybody else use it, and get a new one every six months.”

Please get a new toothbrush more frequently than this.



Clifford Stoll

Bad Passwords

password ← ಠ_ಠ

P4ssw0rd

P&sSw0~d

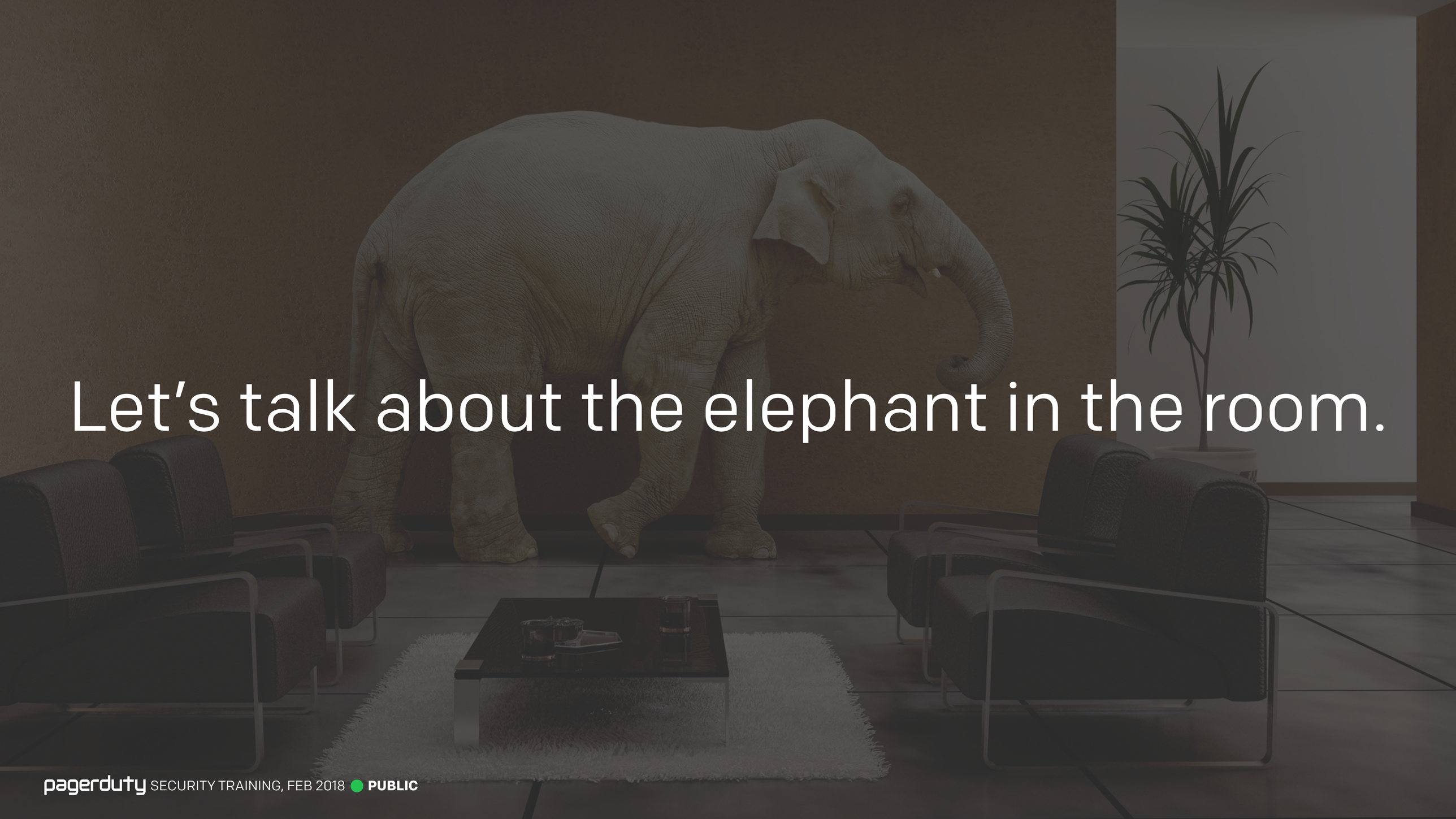
I Like Rainbows!

CorrectHorseBatteryStaple

Good Passwords

```
lakuSj>qP&^`H;Bk^jo]3%}&'iTH\VU*7iw">k:WOZC:t/3A?
-#!frWr[:pGYur=R5E:,gpr%h;]t#}#FjZpwesims(dvRw<!c
Q2D”g(l^C34sNqFv^huED{n*ljmqZ;,3`ROQ$,y2(2dt7|+1z
+}J*%hH!;F&?-f$yUKv.-f&8ZT!y[L]`O\SVV,H}#^[\\nk1e
.urydi3;!NPcy9T*wjXFYK<UCJT}]bL(:)ob0`("V;jF<A14p
```

Except these are now public, and are no longer good passwords.


Let’s talk about the elephant in the room.


“I can’t remember that!”

KEY TAKEAWAY

Use a Password Manager

https://1password.com/

Password Managers

- Generate secure passwords based on any criteria.
- Remember all your passwords for you.
- Allow you to easily use different passwords for everything.

Password Managers

- Not going to lie, they are annoying at first.
- Much better in the long run!
- Not just for work! Use for personal stuff!

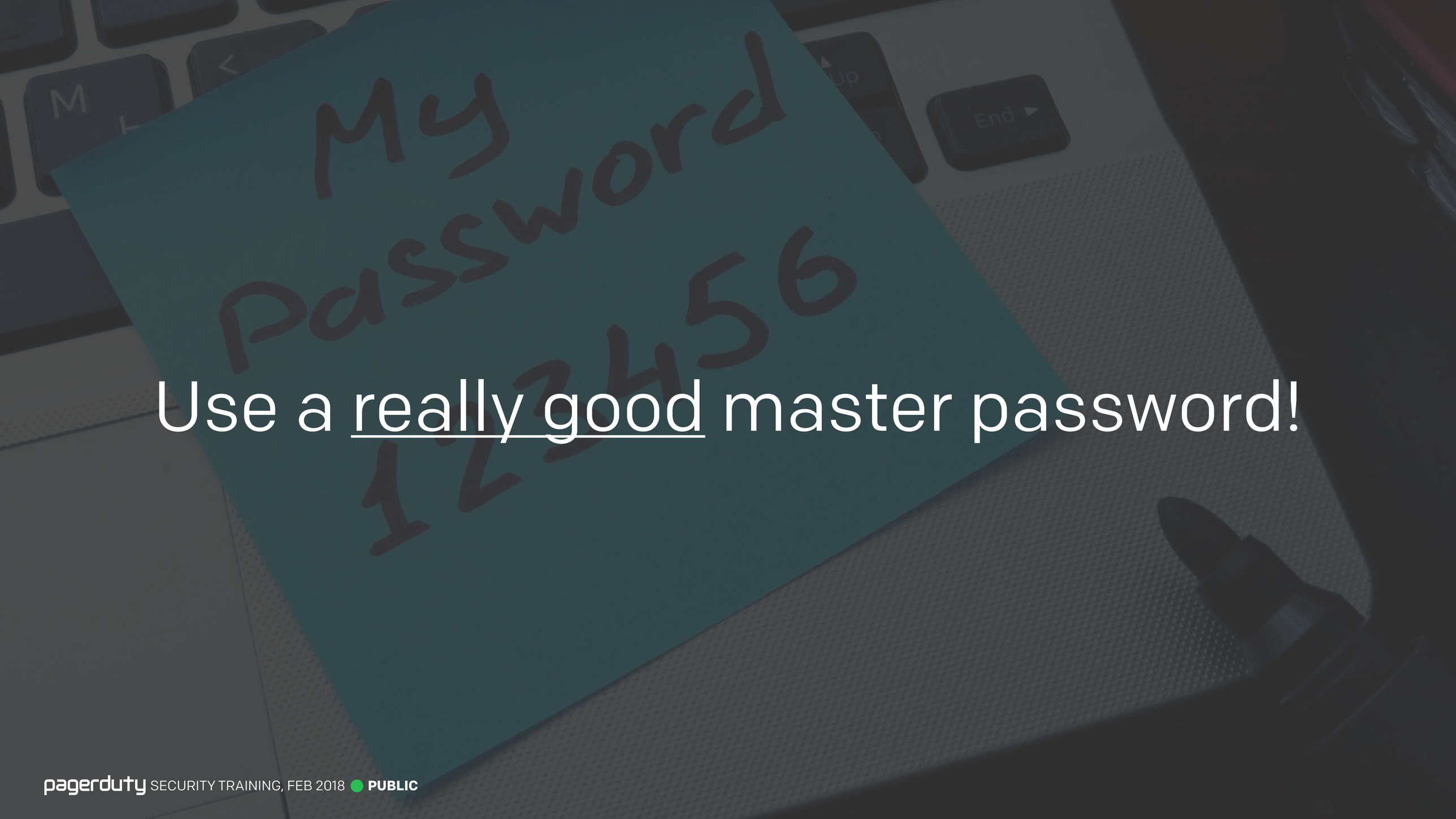

Putting all our eggs in one basket?

“Password managers don’t have to be perfect, they just have to be better than not having one.”

Troy Hunt

Creator of haveibeenpwned.com

https://www.troyhunt.com/password-managers-dont-have-to-be-perfect-they-just-have-to-be-better-than-not-having-one/



Use a really good master password!

a7hD %^Ht #0Fd {-1G A8Th

- Generate the password the same way as any other.
- Split into chunks of 4 or 5 characters.
- Sit down and memorize it (much easier than you think!)
- Type it out lots of times to get it into muscle memory.

But Wait, There's More!

Billy Mays, not Drew from HelpDesk.

Password Equivalency

- Security question answers.
- Personal information.
- Two-factor authentication secrets (sort of).

Answer your security questions

Hello PizzaCatLover, just one more step. Please answer these security questions:

What is your favorite food?

answer

What is your favorite animal

answer

Cancel Continue

https://www.reddit.com/r/ProgrammerHumor/comments/7r3vea/pizzacatlover/

Security Questions

- Never use real information.
- Answers should follow same rules as passwords.
- Most websites store these in the clear. Beware!

1 Email 2 Security 3 Password

MileagePlus account security "enhancements"

In order to enhance the security of your MileagePlus account, we need you to make a few account updates. You will no longer be able to use a PIN to access your account online, although your PIN will still be required for certain phone transactions.

Please select security questions and answers from the dropdown menus.

Question 1 of 5

What is your favorite flavor of ice crea...

Select your answer*

- Banana
- Birthday cake
- Black cherry
- Black sesame
- Brownie
- Butter brickle
- Butter pecan
- Butter rum
- Cajeta/caramel
- Chocolate
- Chocolate almond
- Chocolate chip

Question 2 of 5

Select question*

Question 3 of 5

Select question*

Multi-Factor?

- Knowledge.
- Possession.
- Inherence.

https://en.wikipedia.org/wiki/Multi-factor_authentication

Multi-Factor?

- ~~Knowledge~~. Something you know.
- ~~Possession~~. Something you have.
- ~~Inherence~~. Something you are.

https://en.wikipedia.org/wiki/Multi-factor_authentication

Multi-Factor?

- ~~Knowledge~~. Something you know. Password.
- ~~Possession~~. Something you have. Device.
- ~~Inherence~~. Something you are. Fingerprint.

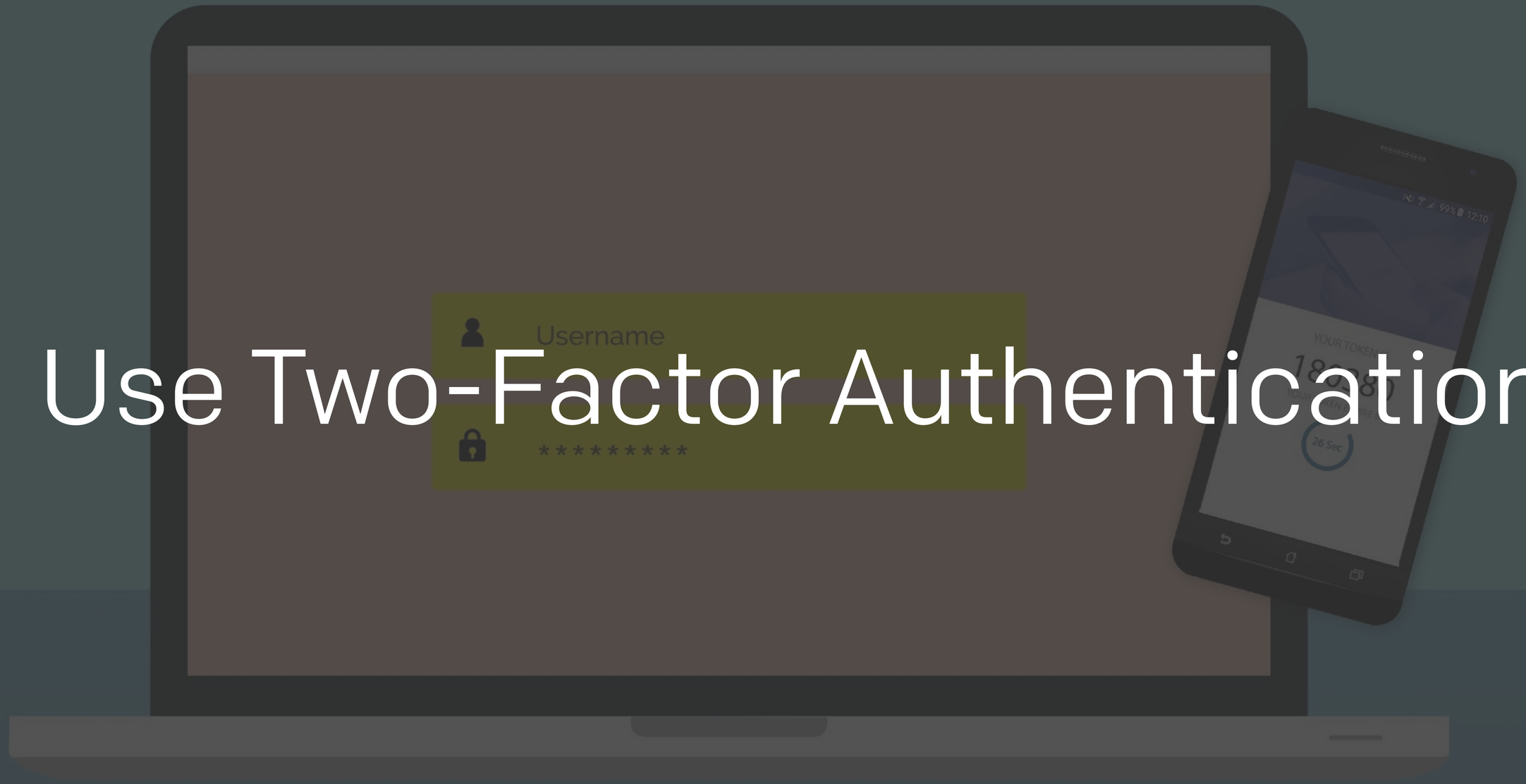
https://en.wikipedia.org/wiki/Multi-factor_authentication

Two-Factor

- Pick two of the factors. e.g. Password + Phone.
- Don’t store two-factor secret with passwords!
- Keep backup codes separate too.

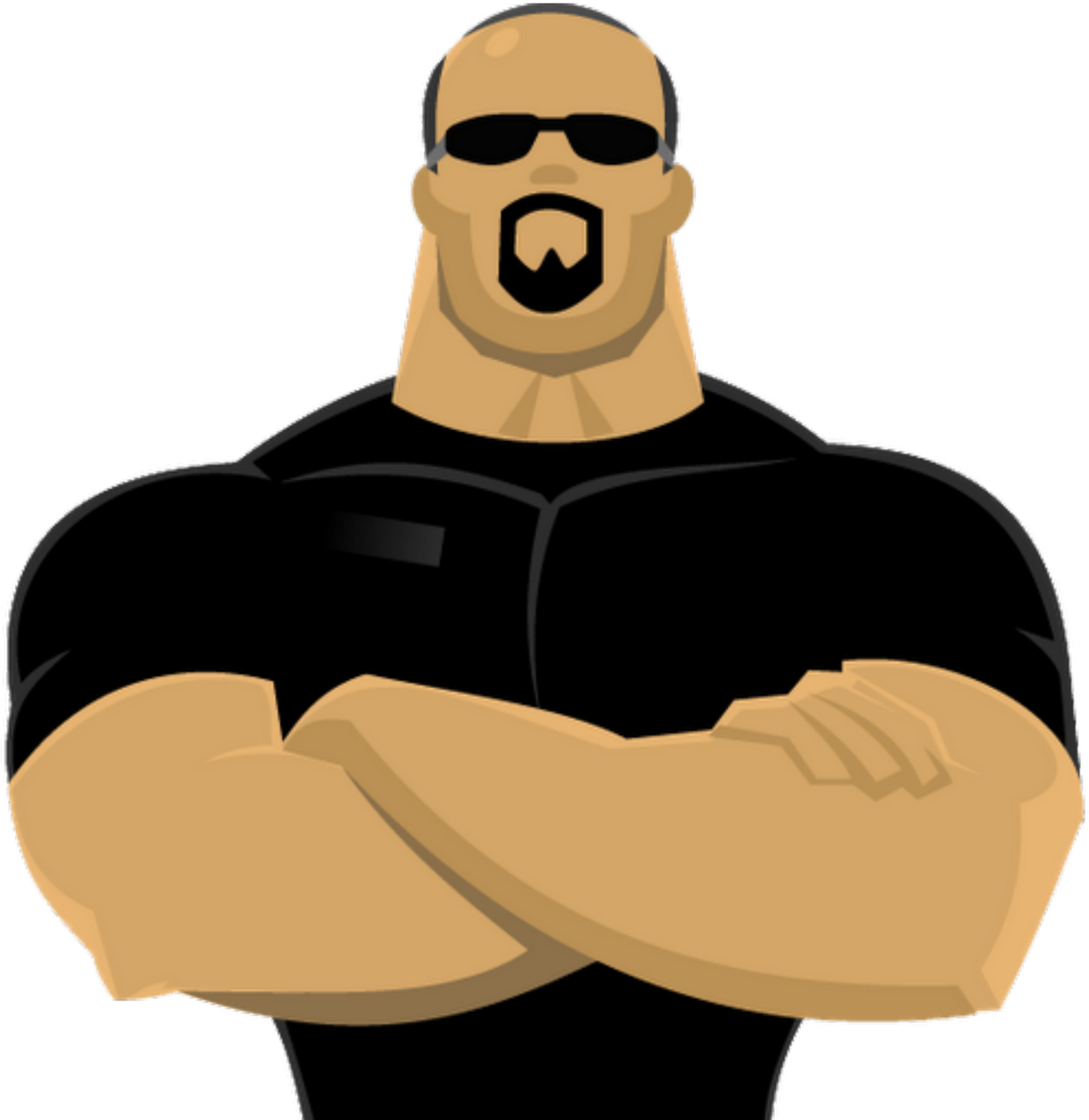

We use Yubikeys!

KEY TAKEAWAY



Use Two-Factor Authentication

Physical Security



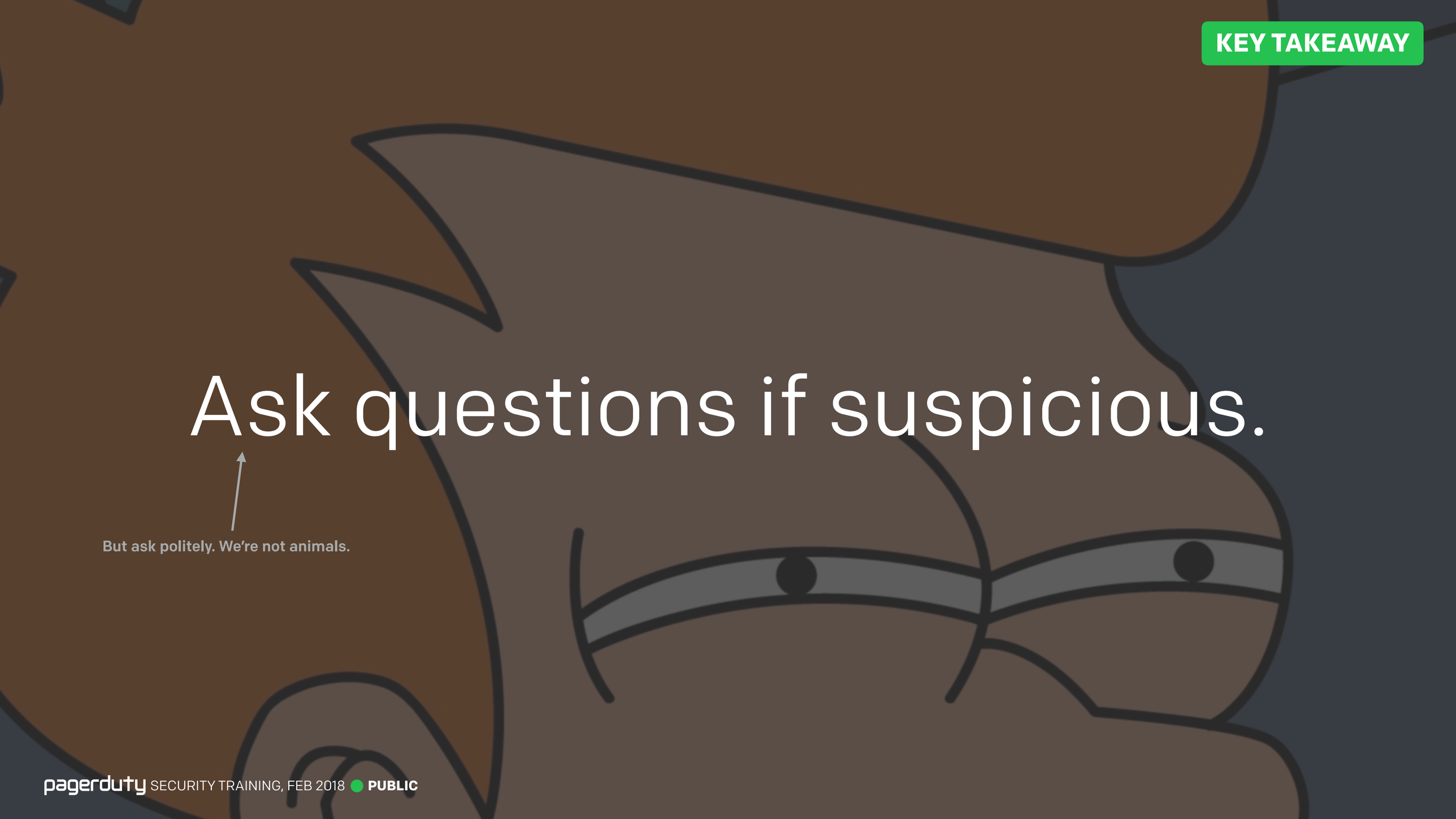
"Security measures that are designed to deny unauthorized access to facilities, equipment and resources, and to protect personnel and property from damage or harm."

Basic Guidelines

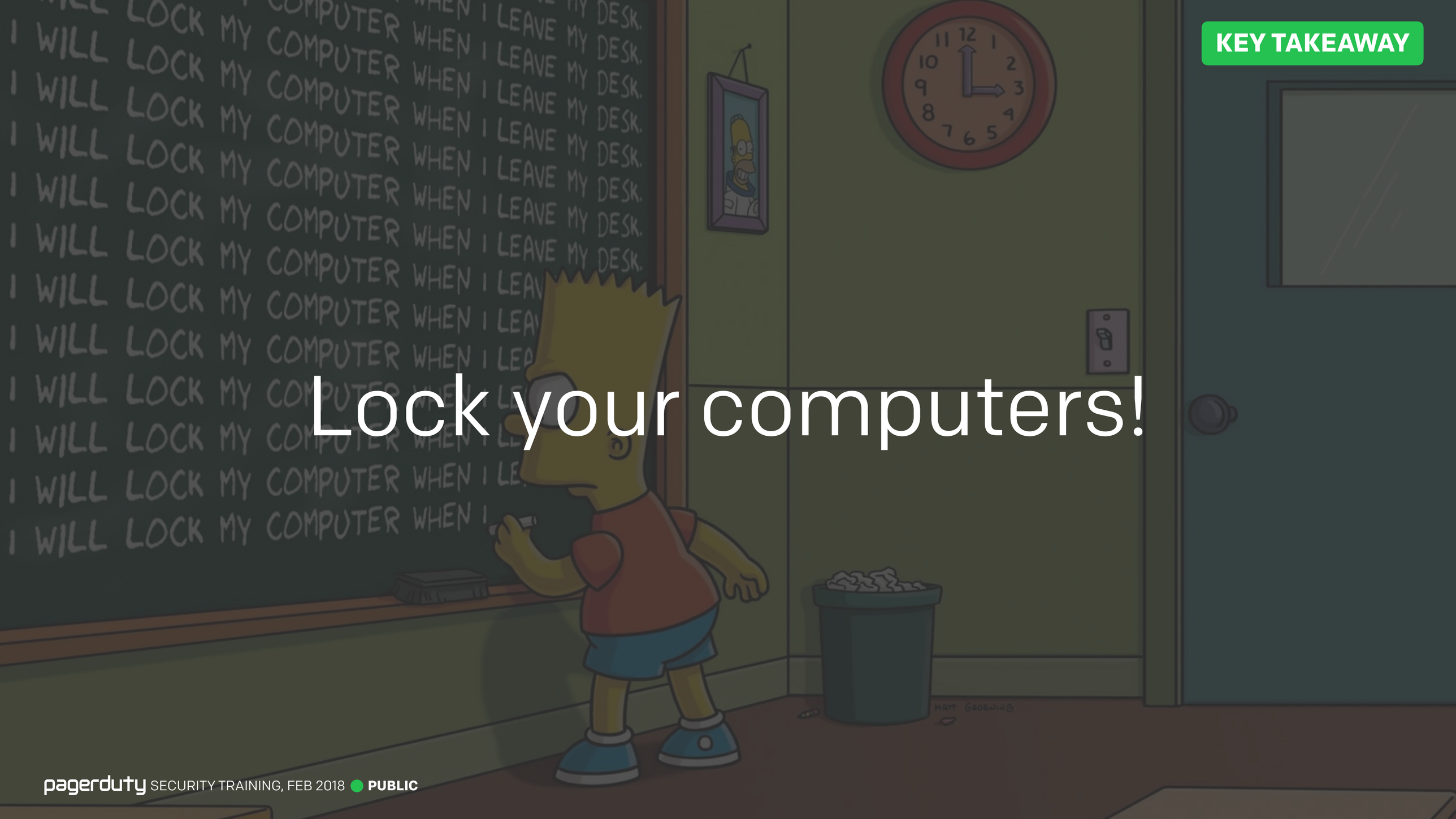
- Question unknown people (politely).
- Verify if unsure.
- Alert Security Team to suspicious activities!

KEY TAKEAWAY

Ask questions if suspicious.

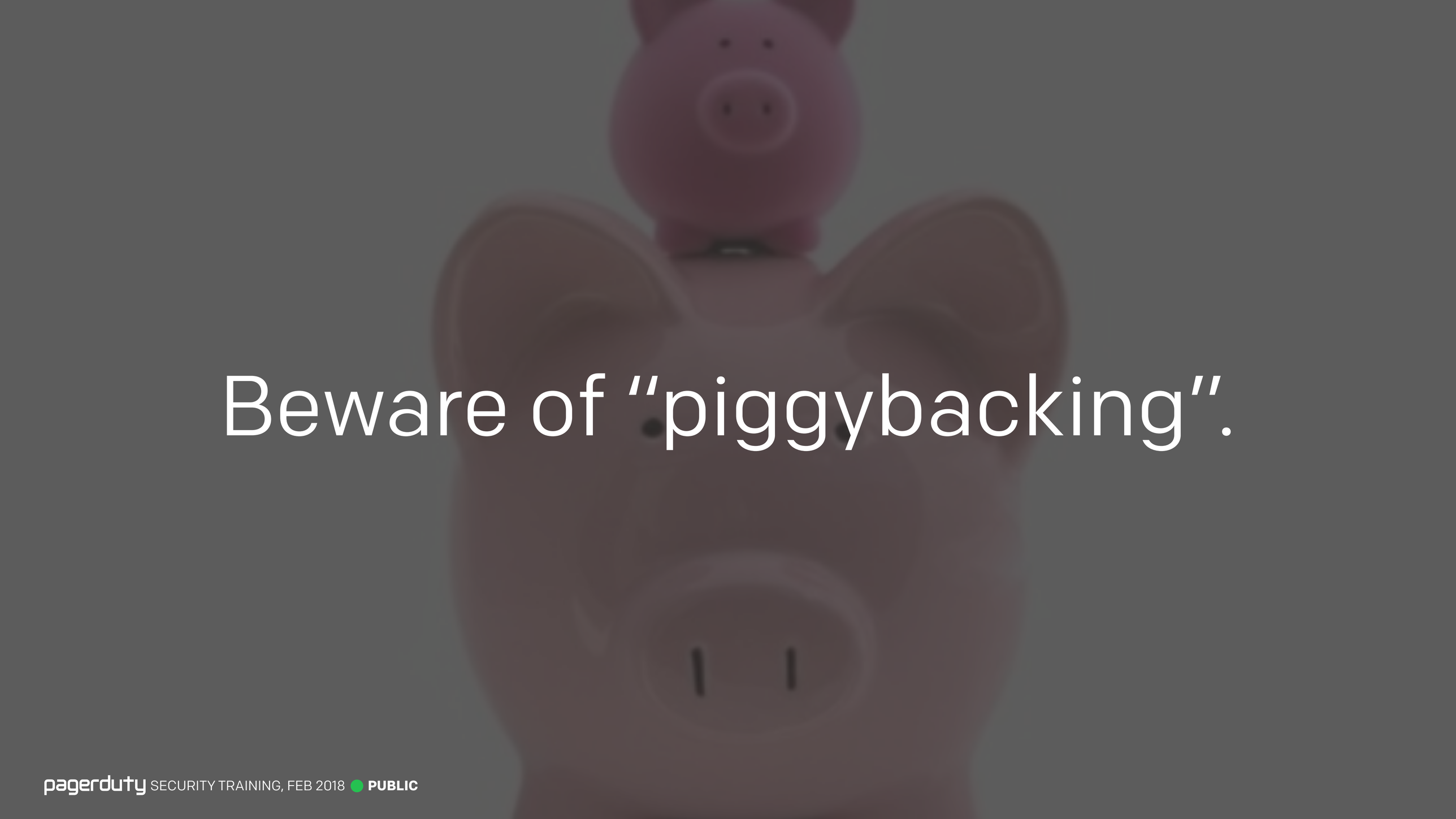


But ask politely. We're not animals.



KEY TAKEAWAY

Lock your computers!



Beware of “piggybacking”.

Building Keycards

- Always carry your keycard with you.
- Keycards required on all doors.
- Photos will likely be required soon.
- Don’t leave your keycard at your desk!

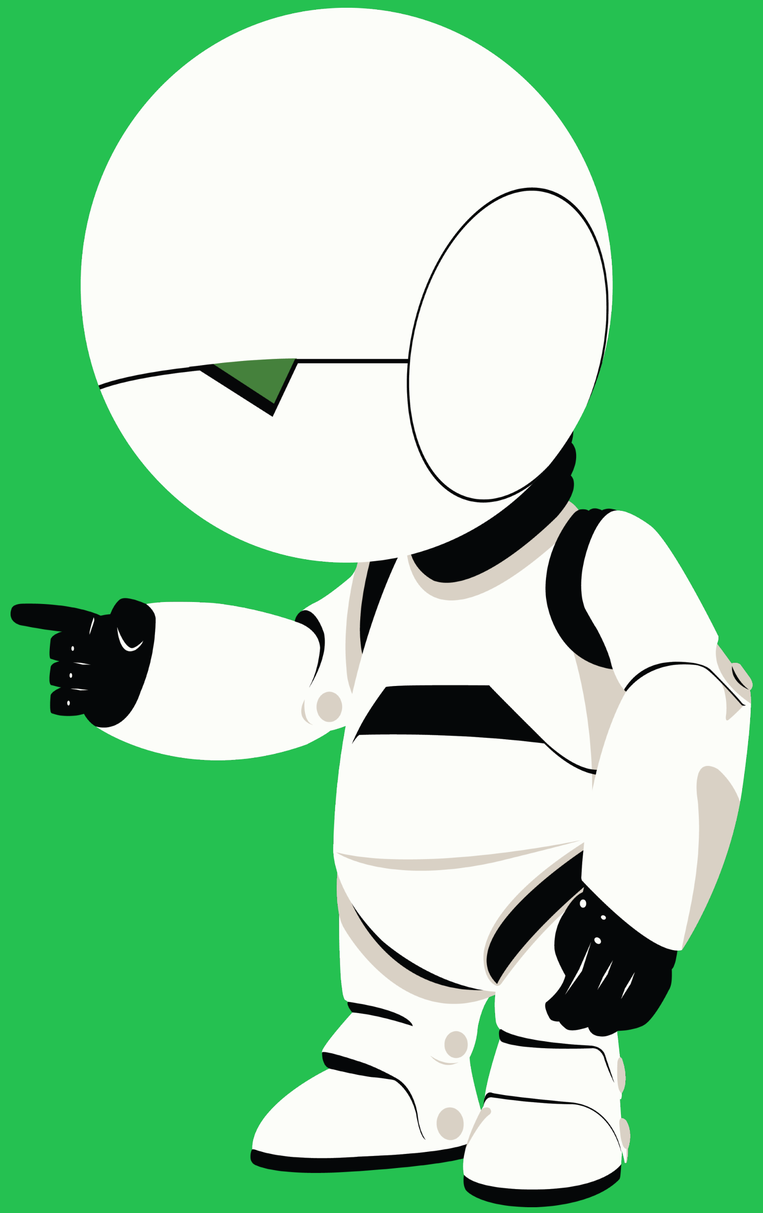
Yet another Hackday project I never finished.

Building Security

- Do not prop open doors.
- Make sure all visitors sign in.

Laptop Stolen?!

DON'T PANIC



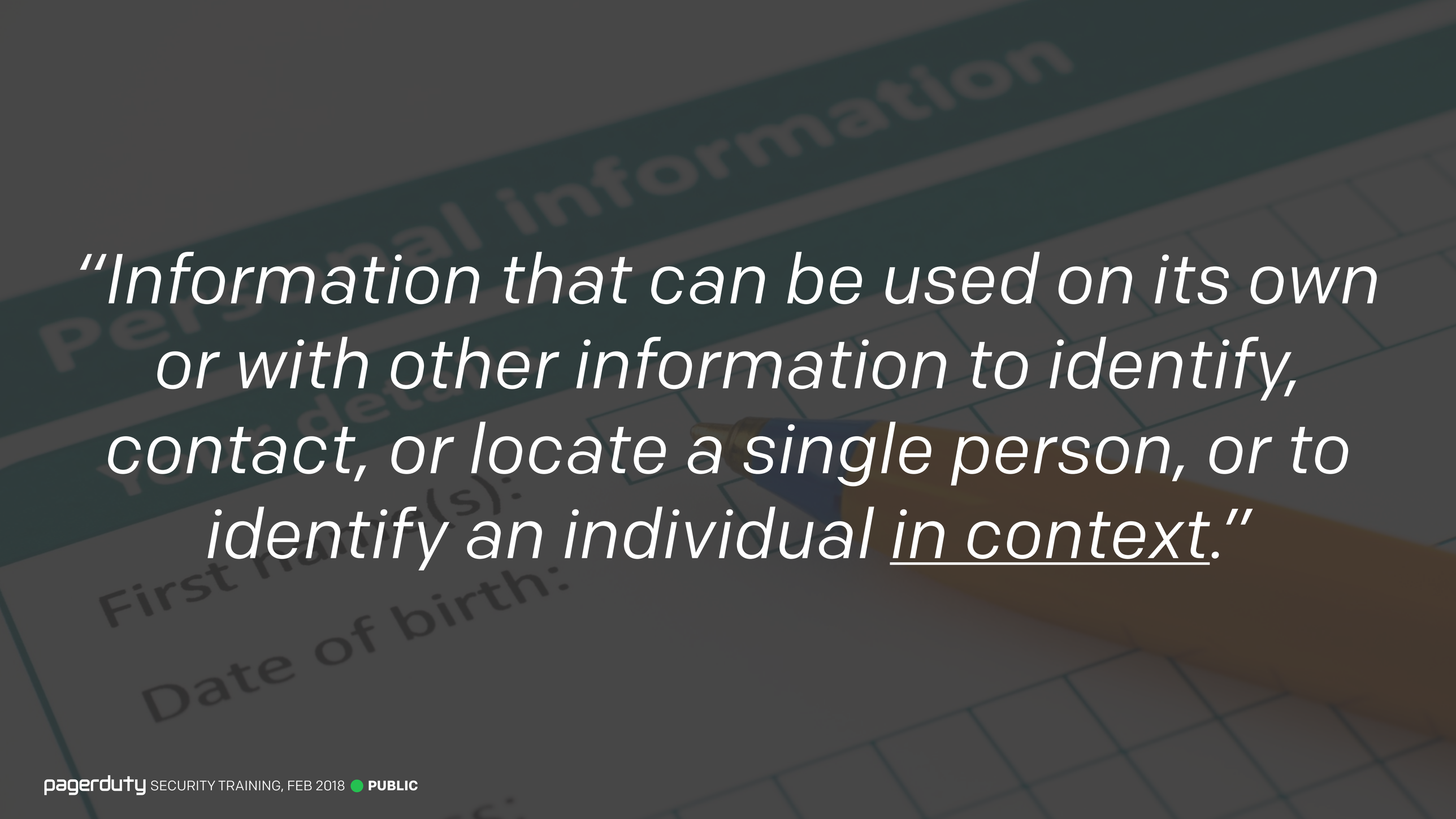
KEY TAKEAWAY

Page HelpDesk or Security at any time for lost/stolen devices.

You will not get into trouble!

Personally Identifiable Information

Also known as “PII”.



"Information that can be used on its own or with other information to identify, contact, or locate a single person, or to identify an individual in context."

Basic Guidelines

- Don’t discuss company info in public.
- Don’t look at info you shouldn’t.
- Don’t disable encryption!
- Be careful with company data...


No, not this kind of data.
Company Data?
Wonder if this comes with an unlimited data plan.

Data Classification

General Data *Anything intentionally available to the public.*

Business Data *Anything used to operate the business.*

Customer Data *Anything provided by the customer.*

Data Handling

	Authentication	Access Control	Storage	Auditing	Encryption	Distribution	Destruction
General		✔	✔			✔	
Business	✔	✔	✔		✔		✔
Customer	✔	✔	✔	✔	✔		✔

Wiki Page Classifications

PUBLIC — *Can be shared with anyone, even outside PagerDuty.*

RESTRICTED — *Can only be shared with customers under an NDA.*

Default

INTERNAL ONLY — *Not to be shared with anyone outside of PagerDuty.*

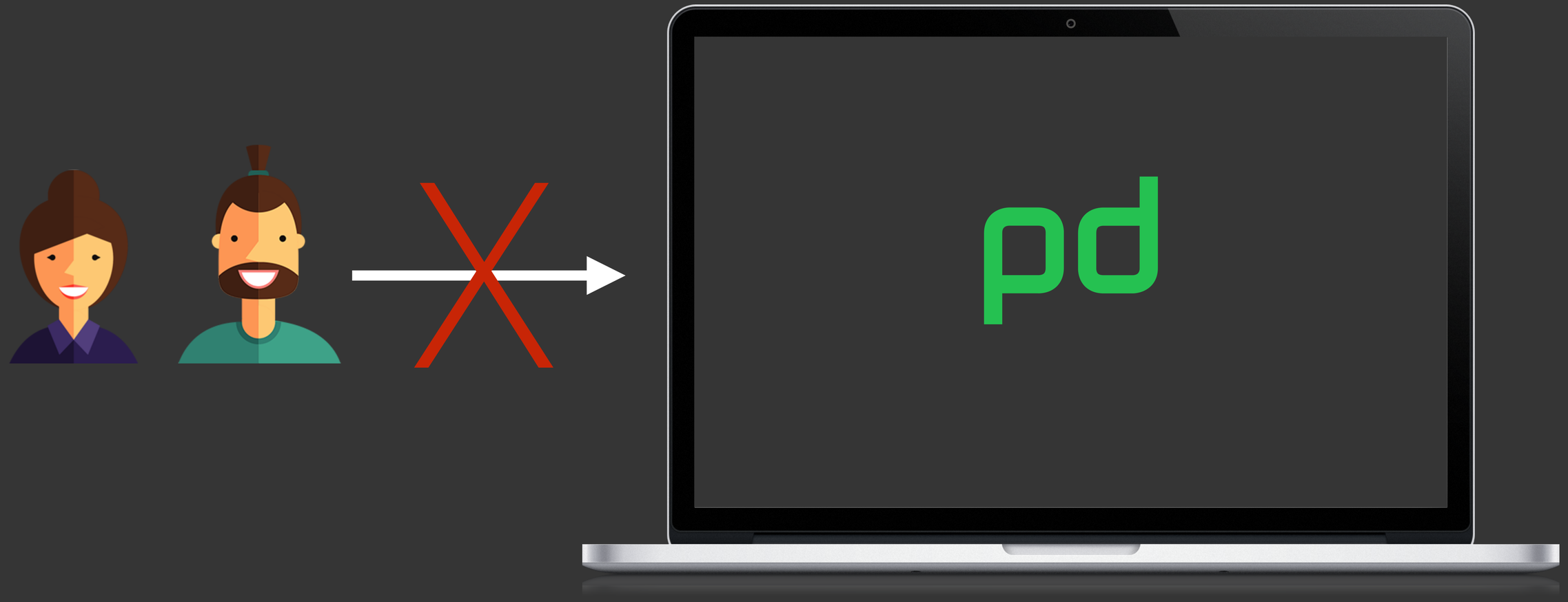
Hey look, I used the same system for these slides!

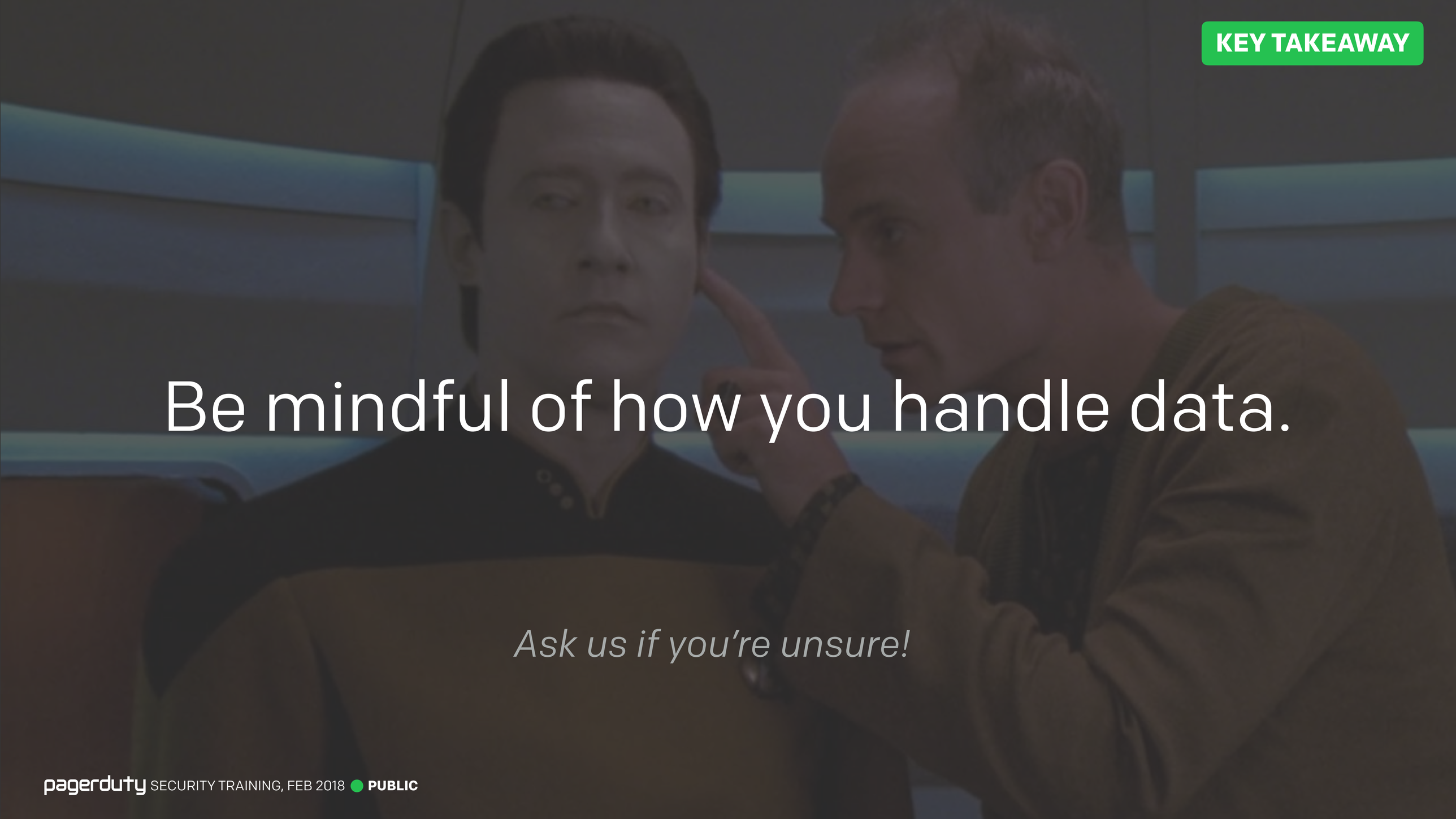
KEY TAKEAWAY

No PagerDuty data on personal devices!

KEY TAKEAWAY

No customer data on PagerDuty devices!

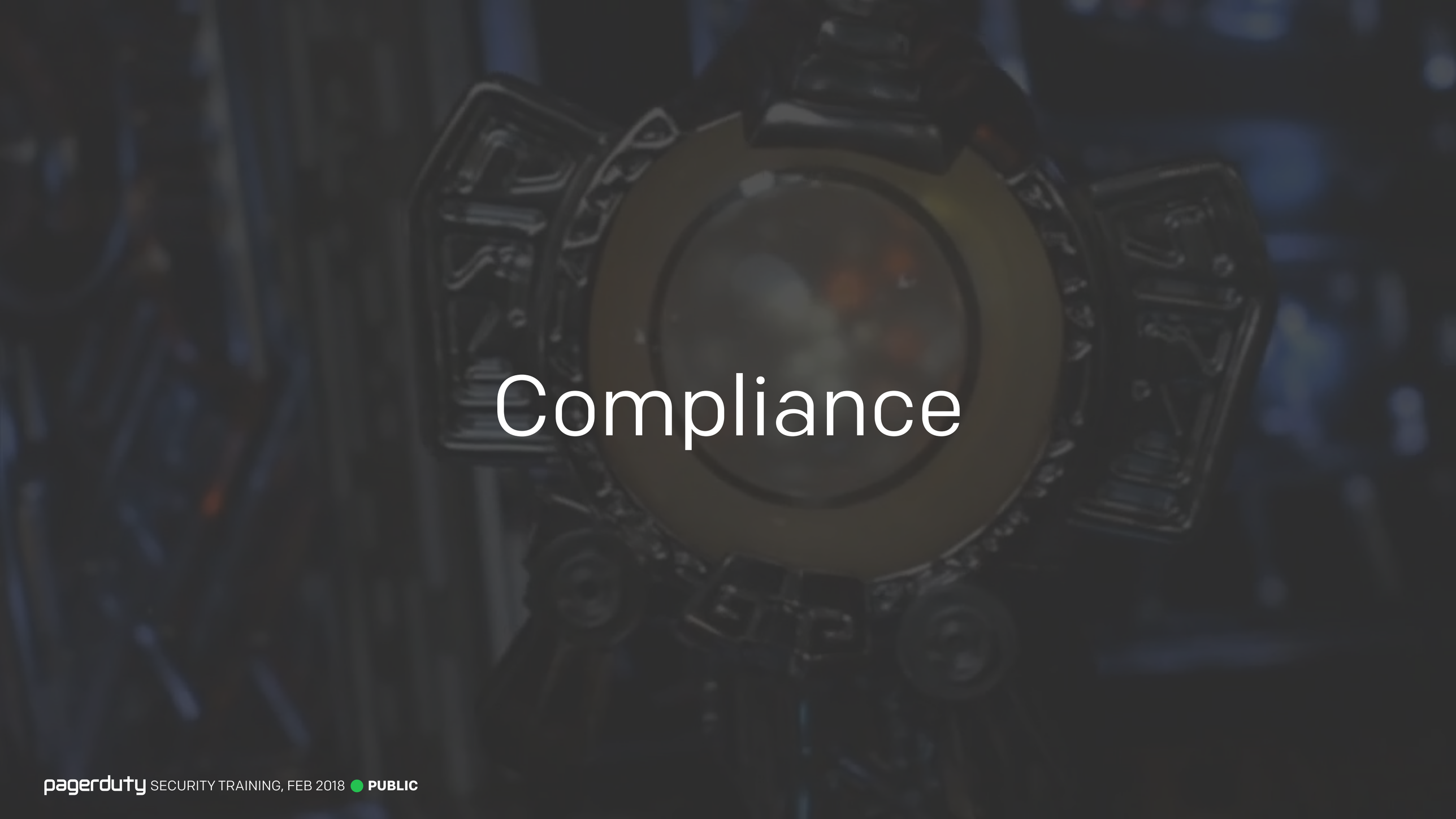




KEY TAKEAWAY

Be mindful of how you handle data.

Ask us if you're unsure!



Compliance

European General Data Protection Regulation (GDPR) is a thing.

GDPR

- Data Controller vs Data Processor.
- Privacy by design.
- Data portability.
- Right to be forgotten.
- Intended purpose.
- Big penalties!

https://gdpr.eu/

GDPR goes into effect on 25th May, 2018.

Pwn All The Things
@pwnallthethings

Dear Santa,

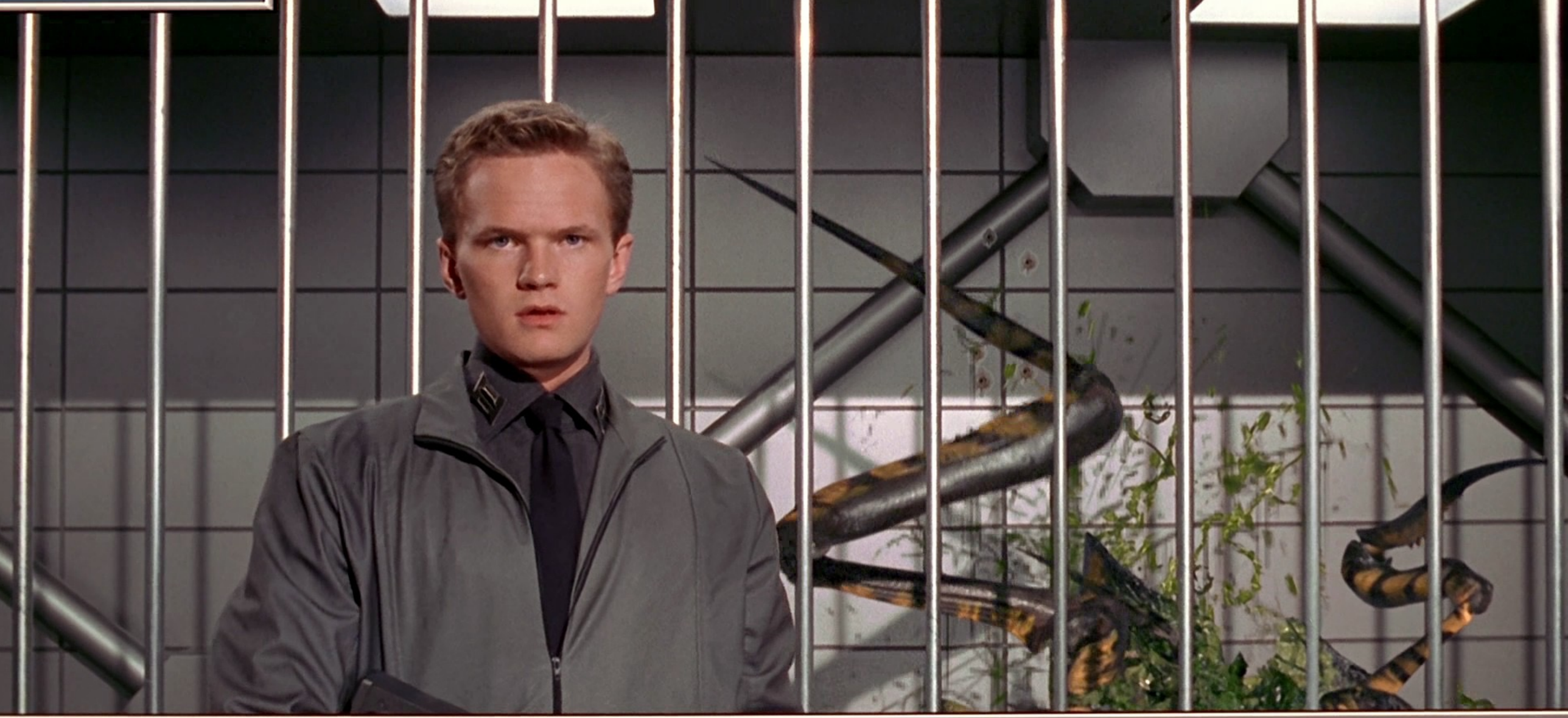
I am writing to invoke my right to be removed from the naughty list, as per Article 17(1) of the EU GDPR and hereby withdraw my consent for my information to be ever held there as per Article 7(3).

Yours faithfully,
Timmy (age 5)

PS I would like a red bike for xmas

https://twitter.com/pwnallthethings/status/945353758137049088

[REDACTED]


WOULD YOU LIKE TO KNOW MORE?

[REDACTED]

LLAMA

Morbo **DEMANDS** Your Questions!

Gain Insight: http://o.aolcdn.com/hss/storage/midas/3feea042a6aabe431c0ce19a83d9281e/204753737/594644139.jpg
Our Job: https://media-exp1.licdn.com/mpr/mpr/AAEAAQAAAAAAAAmaAAAAJDdiY2Q1NjM5LWRjNzMtNGM5NS05YjQ1LTU1NWQwODJlMDZiMA.jpg
Bike Lock: https://www.flickr.com/photos/dustinq/501791705
Chains: https://wallup.net/chains-padlock-computer-notebooks-laptop/
Lying: https://steemit-production-imageproxy-upload.s3.amazonaws.com/DQmeL84DqBvLi5jYUg3gaWsR7DnUoLWVGyMwgTsexVhTQvX
TSA Keys: http://1.bp.blogspot.com/-hu8Kr6-3nrs/VdtMPbThXhI/AAAAAAADjIA/3Mw-5akcpq8/s1600/tsa-master-keys-blurred.jpg
Social Engineering: http://1.bp.blogspot.com/-jIfzV5Jp6fU/U90R09_puqI/AAAAAAAAC1E/r-xBTSkaNRM/s1600/telephone_scam.jpg
Social Engineering (2): http://arsicha.info/wp-content/uploads/2017/11/social-engeener-1000x600.jpg
Phishing: https://web-ster.com/img/other/password-thief-trans.png
Spear Phishing: https://www.deeperblue.com/wp-content/uploads/2016/03/Evren-Wide-Kick-3.jpg
We Want You: https://cdn.shakewellmagazine.com/wp-content/uploads/2016/01/16140712/we-want-you.png
Ask Question: https://www.goldenmeadowsretrievers.com/wp-content/uploads/2014/08/iStock_000021006935_Medium1.jpg
Passwords: https://cdn.someecards.com/someecards/usercards/MjAxMy1mYzEzN2U0NzhlZWZmNDU3.png
Passwords (2): https://twitter.com/desmondholden/status/965747299468136448
Passwords (3): https://www.secplicity.org/wp-content/uploads/2012/06/password-magnifying-glass-cyber-crime-dreamstime_xl_1809270.jpg
Hooded Hacker: https://i.warosu.org/data/g/img/0587/92/1486223405498.jpg
Sad: http://coolwidewallpapers.com/uploads/389/208582-sad.jpg
Salting: https://images-na.ssl-images-amazon.com/images/I/71VNIbjBHAL._UL1500_.jpg
Borat: http://yourbrandlive.com/assets//images/blog/great_success_brandlive.png
Giraffe: http://www.guibingzhuche.com/data/out/273/1736834.png
Selfish: https://i.pinimg.com/originals/ce/54/f8/ce54f88dbdb69ed5be679e738adcf1bb.jpg
Elephant: http://www.elephantsinthelivingroom.org/backgrounds/elephant-in-room.jpg
Dory: https://i.ytimg.com/vi/ixVaAQVEiSM/maxresdefault.jpg
Password Manager: https://cdn.vox-cdn.com/uploads/chorus_image/image/55851763/password_manager_stock.0.jpg
Eggs: http://moziru.com/images/drawn-egg-faces-wallpaper-9.jpg
Password: http://byteshunt.com/wp-content/uploads/2017/12/1513652650558-shutterstock_414545476.jpeg
Billy Mays: http://i0.kym-cdn.com/entries/icons/original/000/000/233/billymays1.png
Two Factor: https://www.revesecure.com/wp-content/uploads/2017/02/Two-Factor-Authentication-Makes-Your-Password-Unusable-for-Hackers-6.jpg
Physical Security: https://yt3.ggpht.com/-IBn3WjnwfBY/AAAAAAAAAAI/AAAAAAAAAAA/C1xM-oTt7os/s900-c-k-no/photo.jpg
Padlock: https://passwd.org/sites/default/files/styles/passwd_fullnode/public/chain-padlock-security-fail.jpg?itok=IM2DDncW
Suspicious: http://i0.kym-cdn.com/entries/icons/original/000/006/026/NOTSUREIF.jpg
Lock Computer: http://i.imgur.com/RIN87.jpg
Piggybacking: http://cdn2.itpro.co.uk/sites/itpro/files/styles/article_main_wide_image/public/images/dir_142/it_photo_71118.jpg?itok=lmjU-RuU
Propped Door: http://www.barkinganddagenhampost.co.uk/polopoly_fs/1.4529708!/image/image.jpg_gen/derivatives/landscape_630/image.jpg
Laptop Stolen?: https://motherboard-images.vice.com/content-images/contentimage/no-id/1423588697646224.jpg
Fry Panic: https://alice961994.files.wordpress.com/2014/11/futurama-fry-stress.png
Hack the Planet: https://i.imgur.com/xjtVvON.jpg
PII: https://i.pinimg.com/originals/9f/36/da/9f36da538d12b2387825b0b3a3ac617f.jpg
Personal Information: http://mrsc.org/getmedia/a0ba5128-d6fb-4008-bf30-893a43abf131/personal_info_618x353.jpg.aspx?width=618&height=353&ext=.jpg
Company Data: https://vignette.wikia.nocookie.net/memoryalpha/images/b/bd/Data_phone.jpg/revision/latest?cb=20141214221139&path-prefix=en
Handling Data: http://www.treknologic.com/wp-content/uploads/2015/09/02-touching-data.jpg
Compliance: https://assets1.ignimgs.com/vid/thumbnails/user/2012/11/28/naviTN_1280w.jpg
GDPR: https://zdnet4.cbsistatic.com/hub/i/r/2017/11/15/be5d1ea8-0ad7-45e6-8588-e2c7eafecd79/resize/770xauto/1f9ea28914a62218eb8a5d8c5c92a3a7/istock-gdpr-concept-image.jpg
Would You Like To Know More?: https://static1.squarespace.com/static/574f0b9a37013b939ab0b866/t/5936b0e717bffc7a44df2ca0/1496756488470/
Morbo: https://orig00.deviantart.net/baf4/f/2009/364/2/f/morbo_by_kornykattos.png