

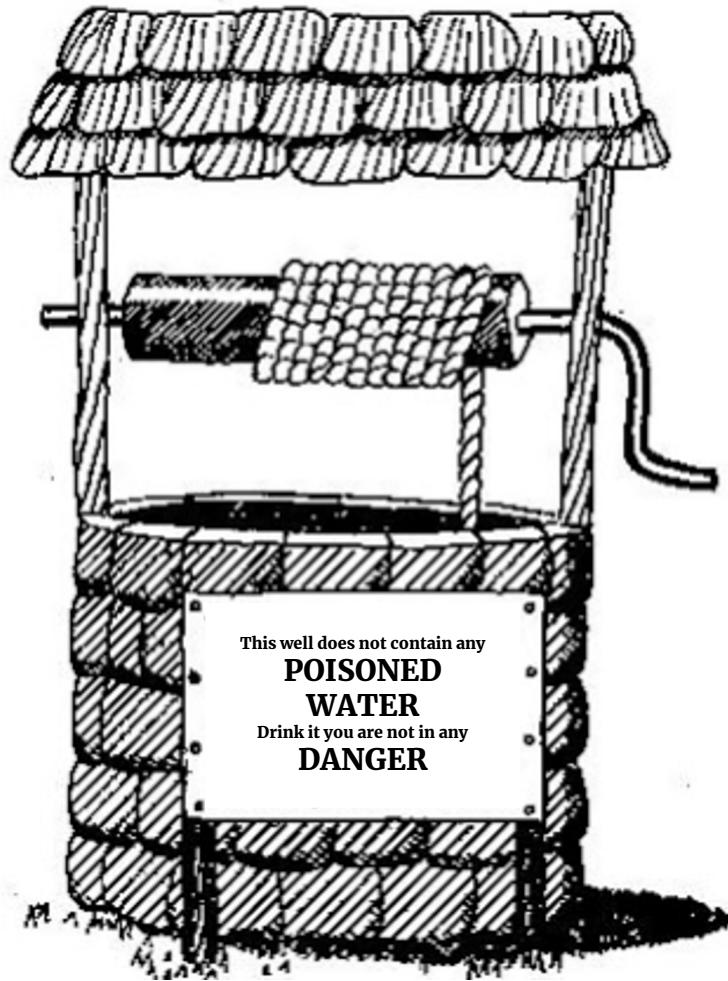
# Do This, Not That

Lessons from 7 Headline Grabbing Security Breaches

Maya Levine,  
Product Manager

# Cloud vs On Premise Threats and Breaches





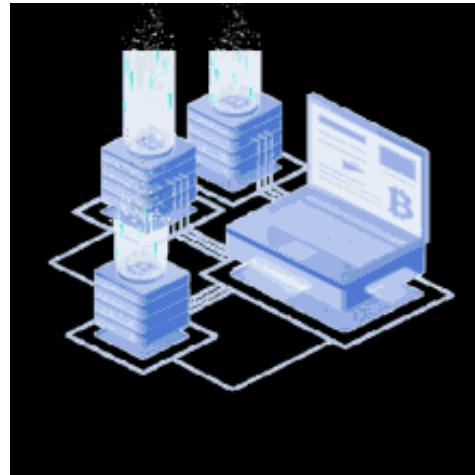
# Supply Chain Compromise via Malicious Image Distribution



AMI



EC2



# Supply Chain Compromise via Malicious Image Distribution

## WHY



# Supply Chain Compromise via Malicious Image Distribution

## WHY



# Supply Chain Compromise via Malicious Image Distribution

## IMPACT



AMI



AMI



AMI



AMI



CPU



AWS  
Bill



# Supply Chain Compromise via Malicious Image Distribution

## TAKEAWAY

- 📍 Trusted Sources Only
- 📍 Static and Runtime Security Tools



bae

Finally got my debit card! Love the blue



753

228

9h



bae

the back code of my card is 388 why is everyone asking? smh



703

208

9h

bae

Had to cancel my old debit card. Apparently someone else was using it. Whatever this one is cute too! ❤️! pic.twitter.com/8KZxAULiSq





Fred

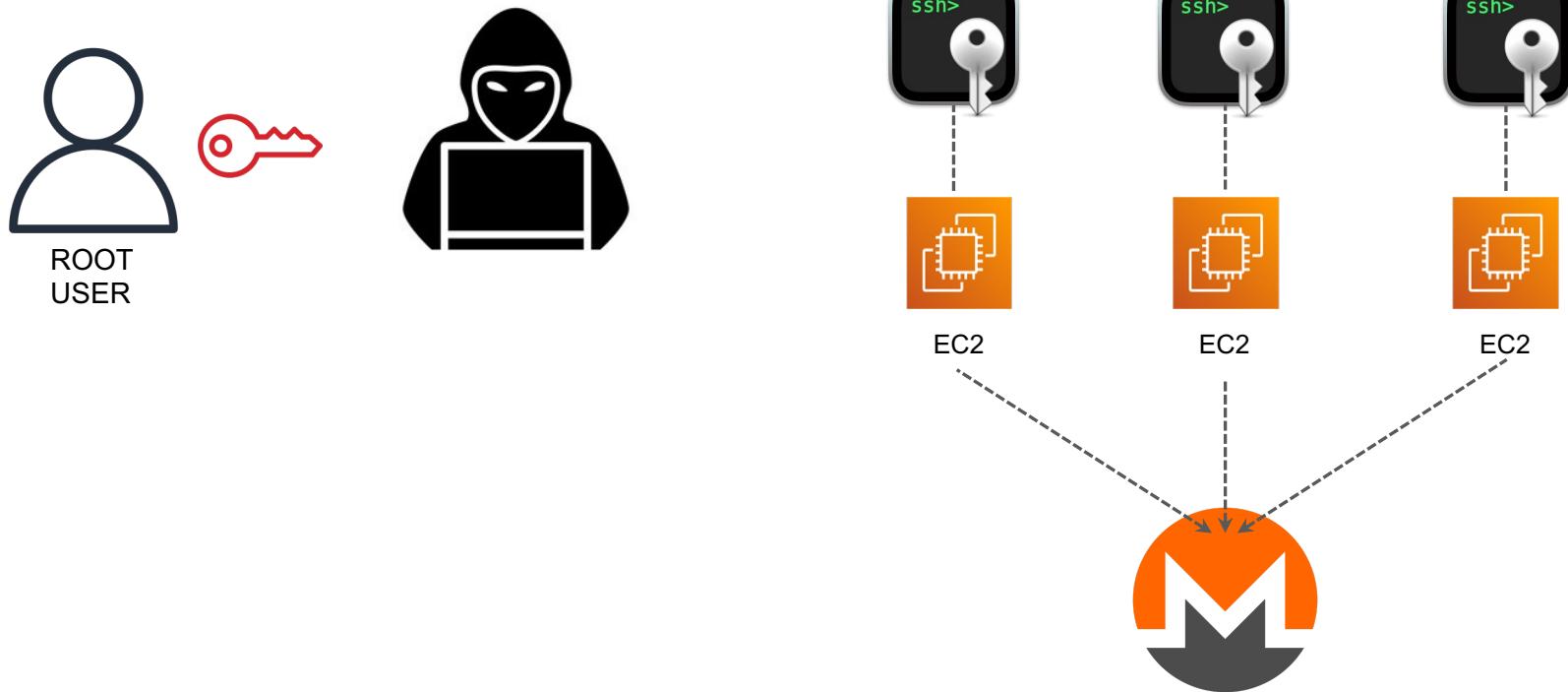
1 Dec

My new credit card came in yay! And the security code is just like my birthday 527 #RichB [pic.twitter.com/d5IW0NZ9OP](https://pic.twitter.com/d5IW0NZ9OP)

Retweeted by Debit Card

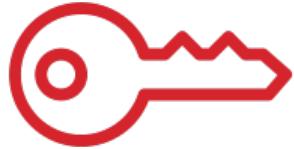


# Cryptojacking via Compromised Credentials



# Cryptojacking via Compromised Credentials

## WHY or IMPACT



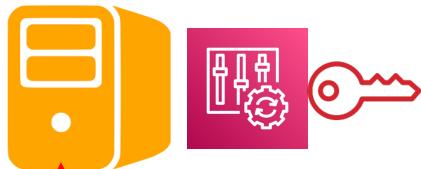
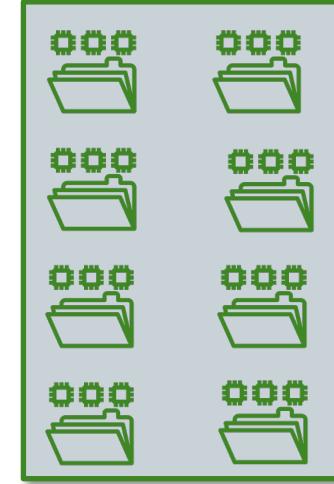
# Cryptojacking via Compromised Credentials

## TAKEAWAY

- 📍 Secrets Management
- 📍 **Real Time Monitoring**



# Cloud Ransomware Extortion

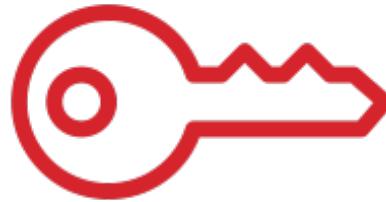


**LOG4J**



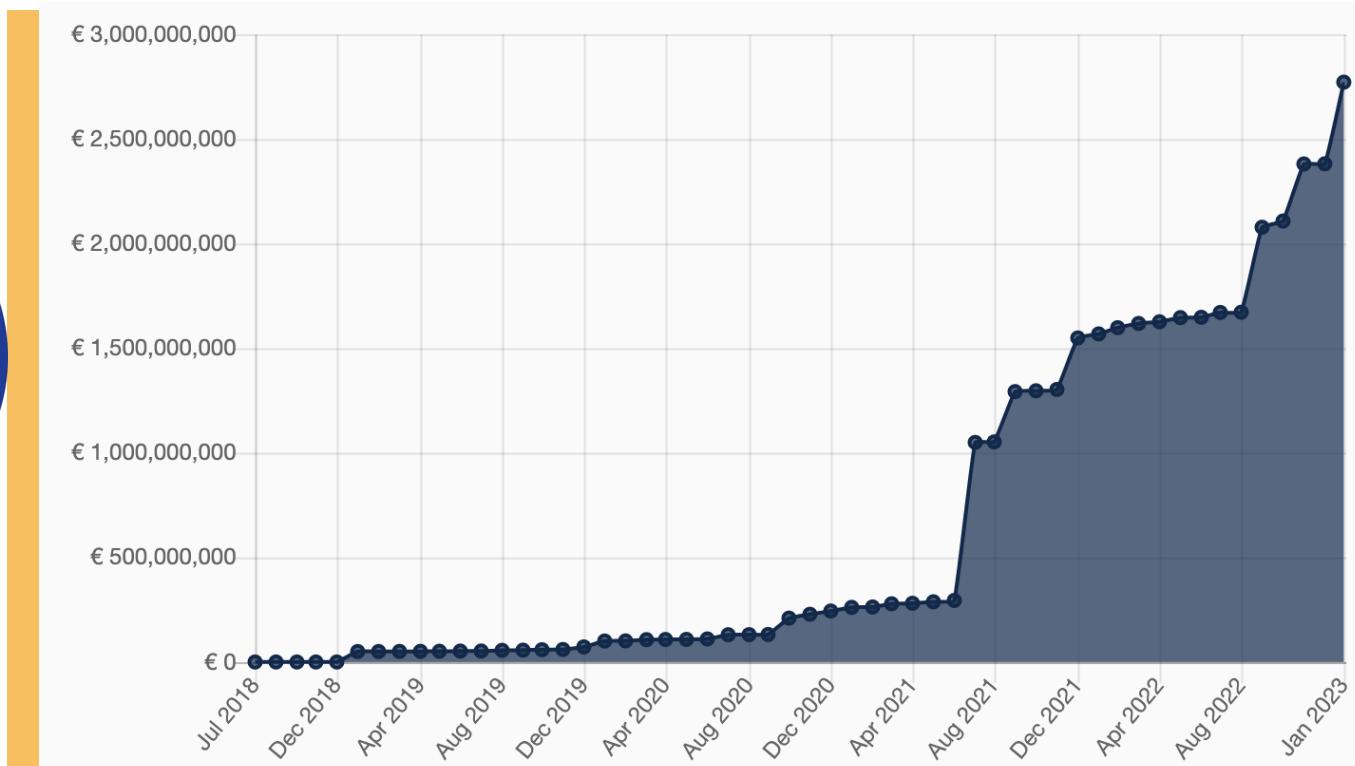
# Cloud Ransomware Extortion

## WHY



"Action": "s3:\*

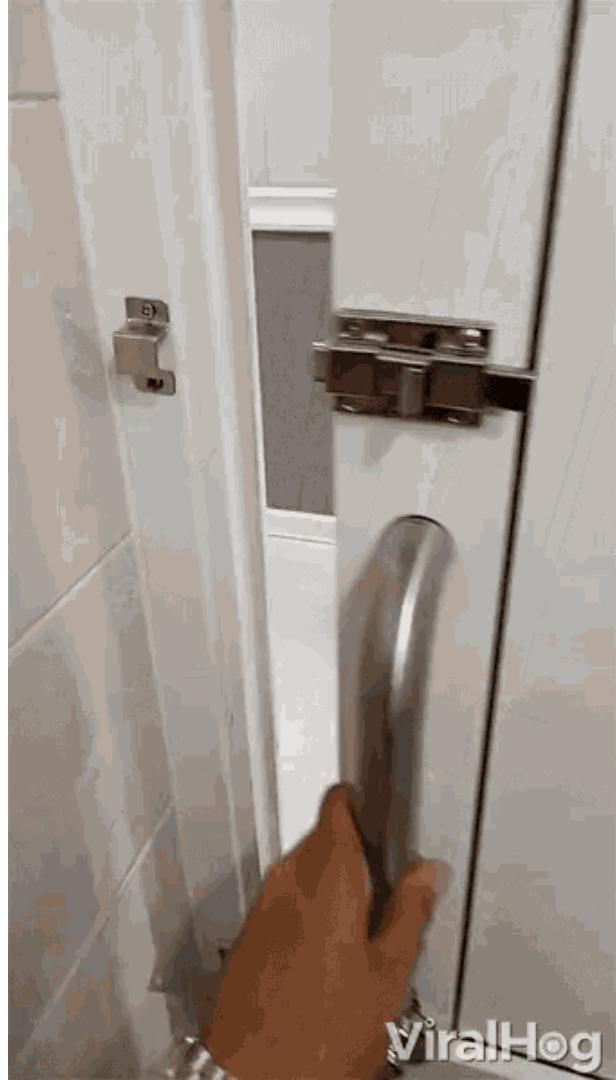
# Cloud Ransomware Extortion IMPACT



# Cloud Ransomware Extortion

## TAKEAWAY

- ➊ Proper Vulnerability Management
- ➋ Waiting for Patch? Mitigating Controls
- ➌ Overly Permissive is a Boon to Attackers



ViralHog

 sysdig

# Data Leak via Misconfigured Object Storage



<b>Reporter Name &amp; Contact</b> (Reporter is the individual reporting the event, not the person completing this form) <b>NOTE:</b> If reporter information is available to vendor/sub-vendor but not able to be shared please note 'IN CONFIDENCE' in Name field	Patient Date of Birth: Name: [REDACTED] Address (minimum information required is the Country of Reporter): [REDACTED] Valley Forge, PA, 19446, USA Email: xxx Telephone No: +17 [REDACTED]	Did reporter consent to further follow-up?  Unknown
<b>Verbatim and Event Description</b> (Describe the adverse event (AE)/beneficial effect/at risk, including all pertinent information)	Provide clear narrative description, as provided by the reporter, of the sequence of event(s), diagnosis, treatment, (including dates), and any other relevant details. Include any laboratory tests and/or results provided by the reporter.	
<u>If death is reported please inquire about the cause of death and note on this report</u>	<p>IVR: Automated message.</p> <p>IVR: After the beep, please say your complete mailing address including your house or apartment number, street name, city, state, and zip code. Please spell any difficult words. Go ahead. &lt;beep&gt;</p> <p>Caller: (Misplaced comments) [REDACTED], [REDACTED], Valley Forge, Pennsylvania, 19446 and I gave money to somebody to buy one of the Advil 10 tablets like a travelling size, I cannot get the lid off. I have worked and worked then I used one of those.</p> <p>IVR: Automated message.</p>	



Google Cloud Storage

# Data Leak via Misconfigured Object Storage

## IMPACT

The screenshot shows an email window with the following details:

**From:** Pfizer  
**To:** undisclosed-recipients; Ronald E. Blaylock (mailto:blaylockronald@aol.com)  
**Date:** November 22, 2021 at 2:31 PM

**Subject:** INVITATION

**Body:**

Good Day,

I would like to extend an invitation to your company to supply us with the attached product. The product we request may fall out of your scope of work, hence we would like you to source the product and supply to us. Attached to this email is a Request for Quotation of the products we need. Please note this is an urgent once off tender, therefore we require these components at your earliest convenience. We now await your quotation.

**Product/Model No:** IPVES Pumps VKTW722  
**Qty. 45 units**

If your supplier have the items to the quantity required, kindly send us your quotation for immediate approval.

Regards,

Ronald E. Blaylock

Procurement Manager  
**Pfizer Netherlands B.V.**  
Rivium Westlaan 142  
2909 LD Capelle aan den IJssel, Netherlands  
Tel: +31(0) 280800 880  
Fax: +31(0) 280800 870  
Email: [quote@pfizerbvl.com](mailto:quote@pfizerbvl.com)

**Disclaimer:** The information transmitted including any attachments is intended only for the exclusive use of the person(s) or entity to which it is addressed and may contain confidential and privileged material that may be subject to legal privilege. Any perusal, review, retransmission, dissemination, distribution, reproduction or other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient without the sender's prior consent is unauthorised and strictly prohibited. If you have received this message in error, please notify the sender immediately and delete the message from your computer without making any copies. Any personal views and opinions expressed in this e-mail message are the sender's own and do not necessarily represent the views and opinions of the Company.

\*consider the environment and think before you print\*

# Data Leak via Misconfigured Object Storage

## TAKEAWAY

- 📍 Make buckets private and add authentication protocols
- 📍 Refrain from logging sensitive customer data if possible

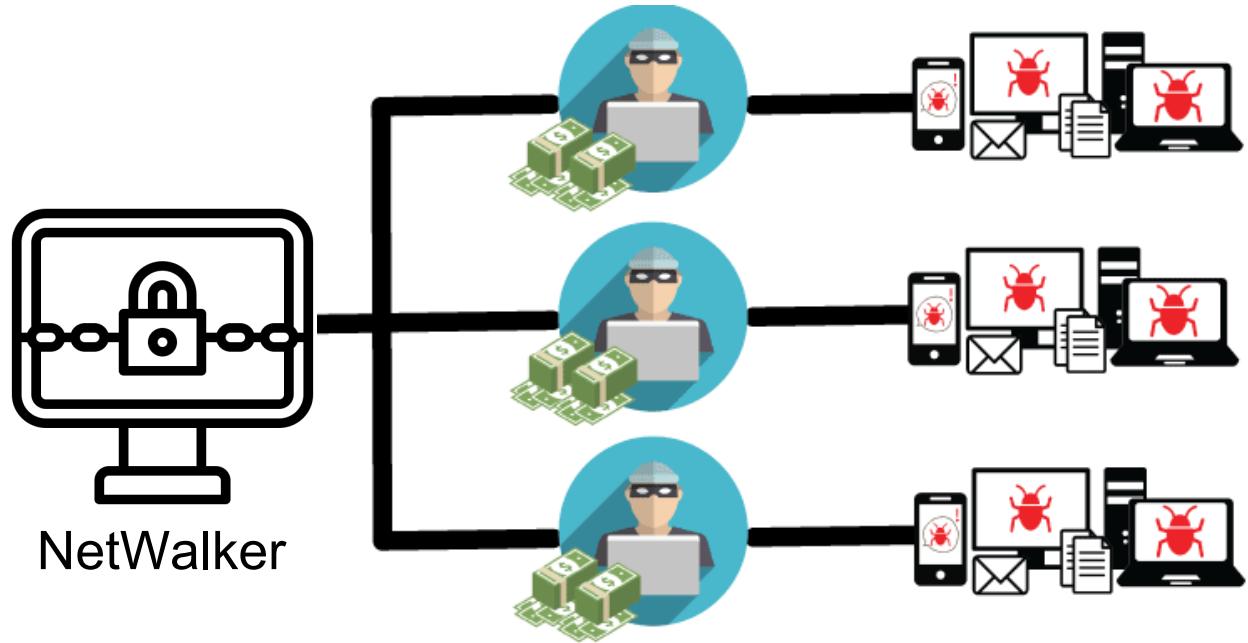
If not... encrypt!

A black and white photograph from the television show Friends. The character Chandler Bing is shown from the chest up, looking slightly downwards and to his right with a neutral expression. He has dark hair and is wearing a dark, patterned jacket over a light-colored shirt. The background is a plain, light-colored wall. On the far left edge of the frame, the back of a person's head and shoulders are visible, wearing a light-colored jacket. The overall lighting is soft and even.

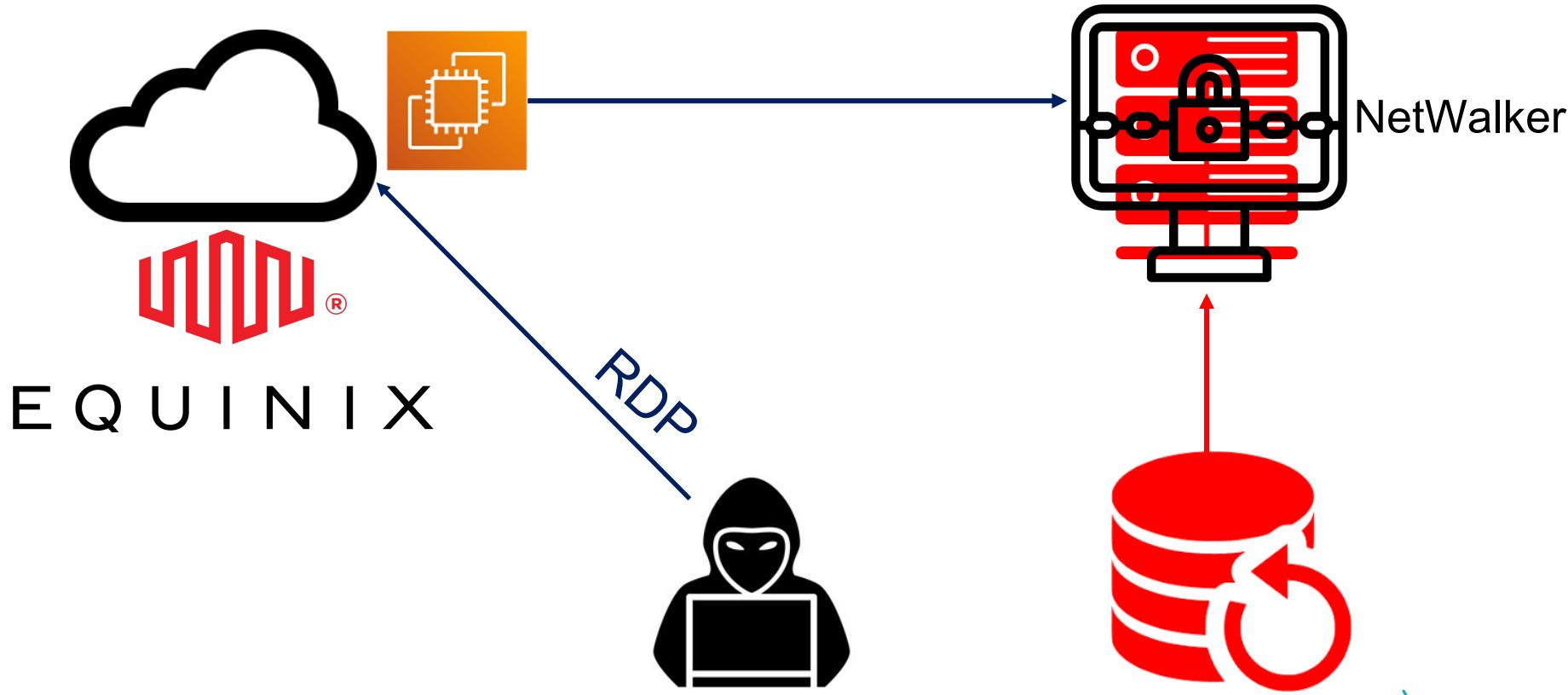
HBOmax

PIVOT!

# On Premise Ransomware via Pivot from Cloud



## On Premise Ransomware via Pivot from Cloud



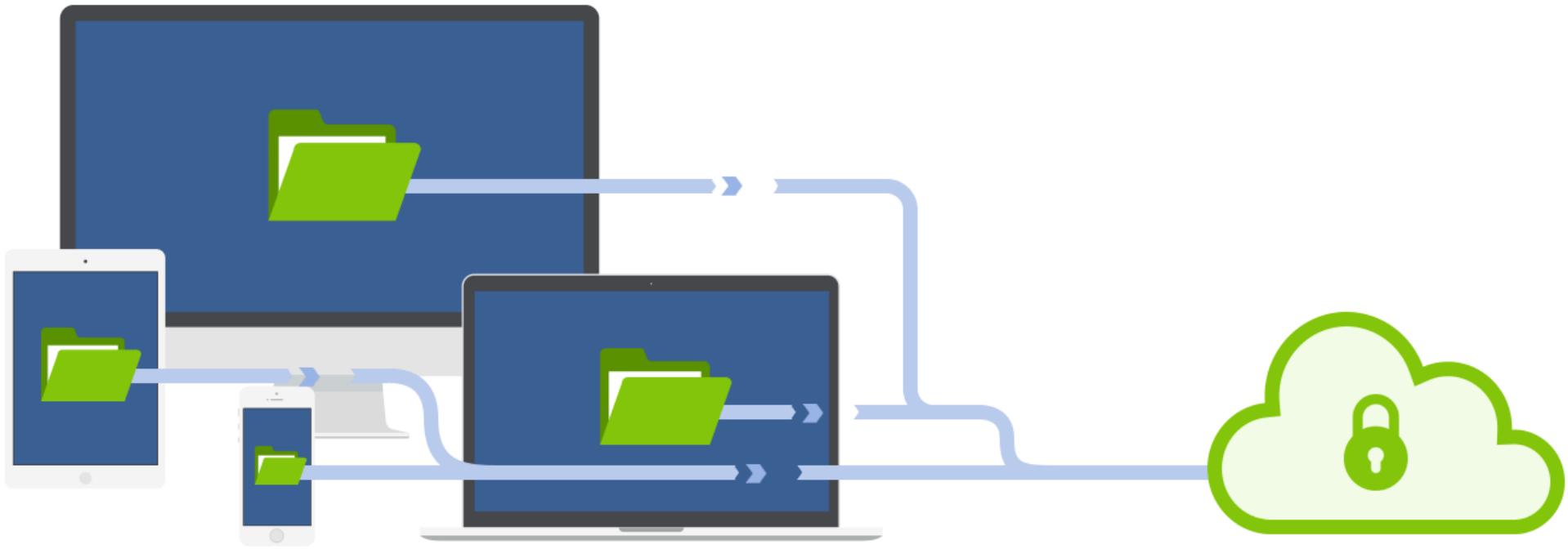
# On Premise Ransomware via Pivot from Cloud

## WHY



# On Premise Ransomware via Pivot from Cloud

## IMPACT



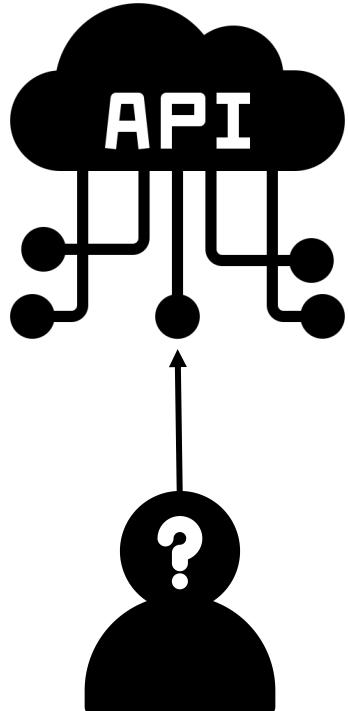
# On Premise Ransomware via Pivot from Cloud

## TAKEAWAY

- 📍 Inventory of Cloud Assets
- 📍 Security Policies Applied to all Systems
- 📍 Backup (So You Don't Pay Up)



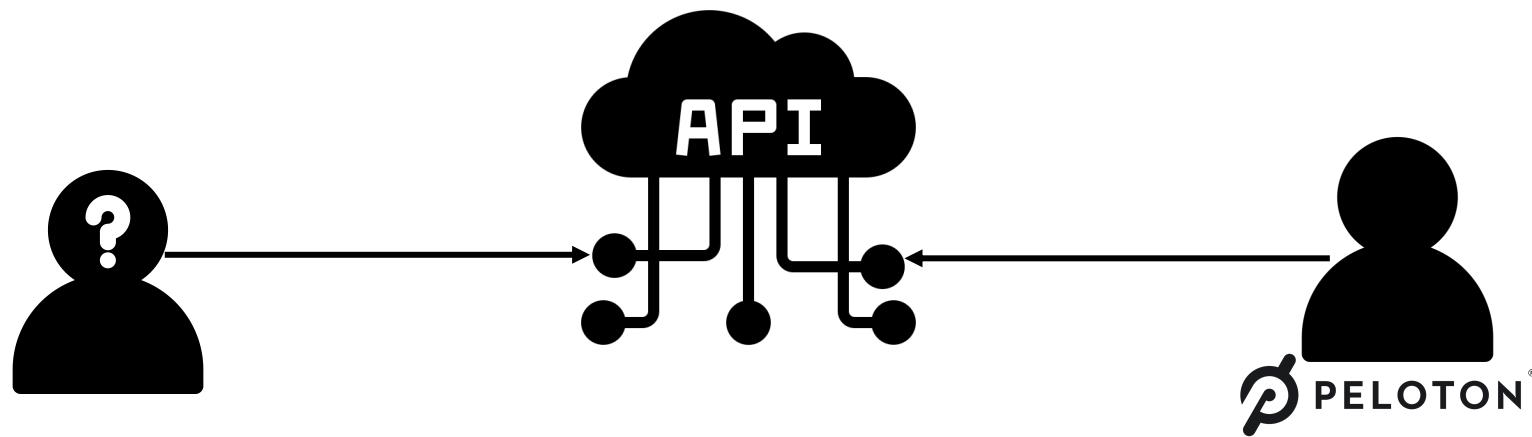
# Data Exfiltration via Unauthenticated API Request



```
"ae": {
    "age":41,
    "age_group":"40s",
    "avatar":"https://s3.amazonaws.com/peloton-profile-images/
    "gender":"female",
    "short_gender":"F",
    "is_birthday":false,
    "is_digital":false,
    "is_profile_private":true,
    "location":"Maryland",
    "nth_workout":2,
    "start_time":1612526841,
    "user_id":"6[REDACTED]",
    "username":"Stj[REDACTED]",
    "workout_id":"ae[REDACTED]",
    "is_live":true,
    "bike_number":null,
    "is_studio":false,
    "peloton_id":"a6[REDACTED]",
    "peloton_start_time":1612525884,
    "tags_info":{
        "primary_name":"",
        "total_joined":3
    },
    "authed_user_follows":null
}
```

# Data Exfiltration via Unauthenticated API Request

WHY



# Data Exfiltration via Unauthenticated API Request

## IMPACT

Information disclosed included:

- User IDs
- Instructor IDs
- Group Membership
- Location
- Workout stats
- Gender and age
- If they are in the studio or not

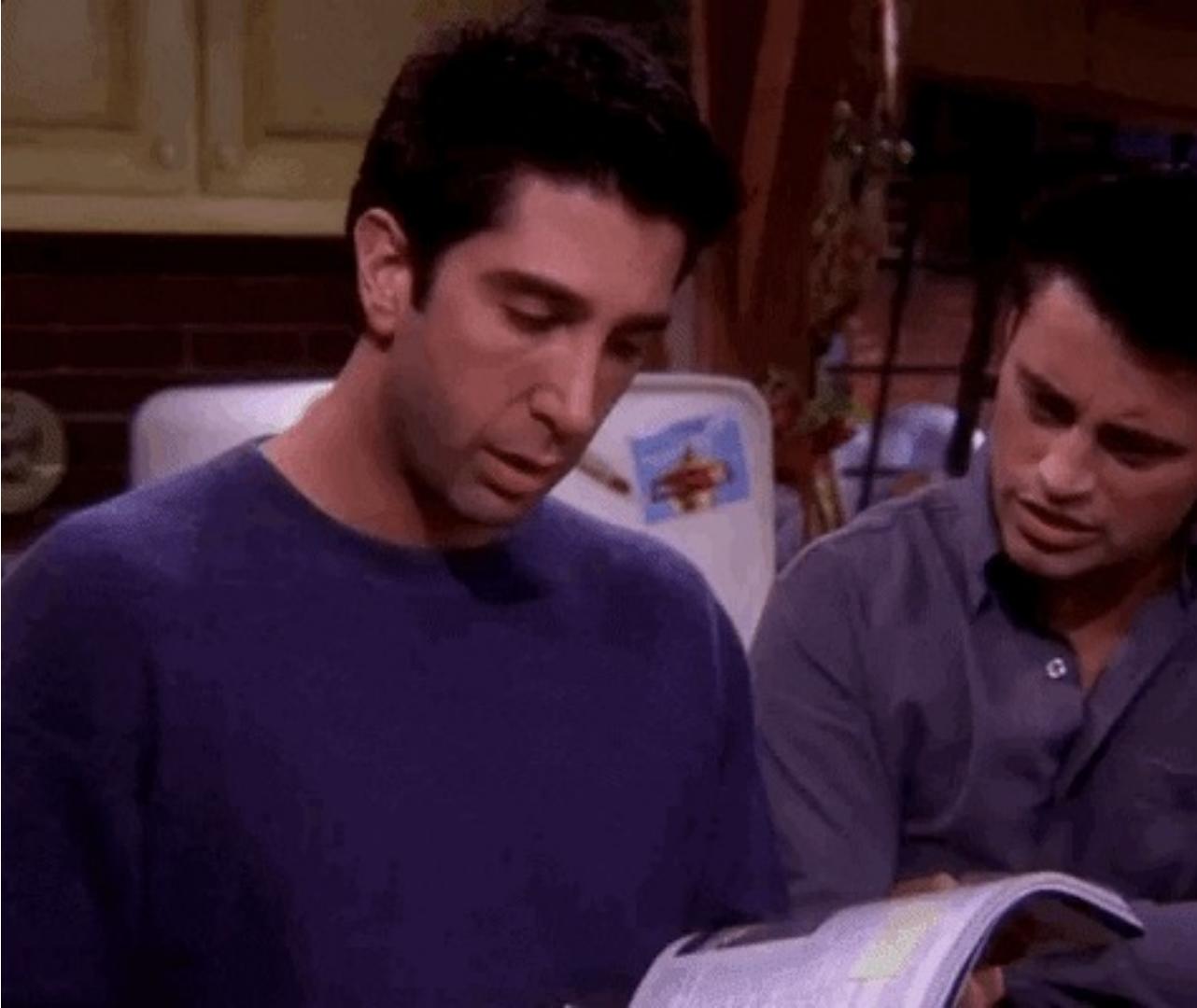


# Data Exfiltration via Unauthenticated API Request

## TAKEAWAY

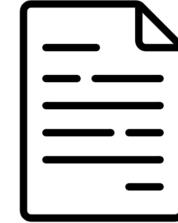
- 💡 Secure Coding Practices in Development Process
- 💡 API Security Tools



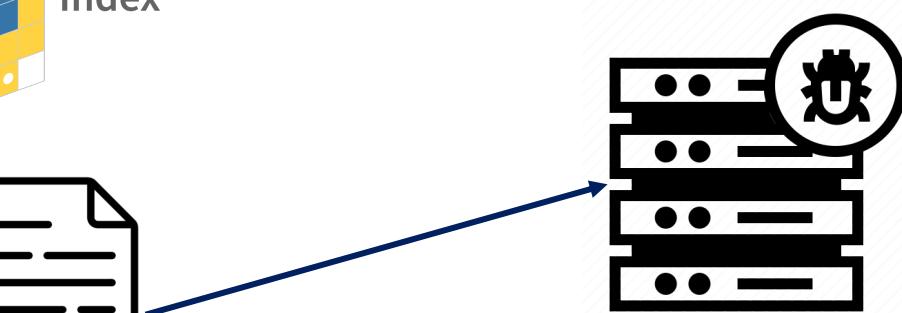


# Supply Chain Compromise of Open Source Software

 PyTorch



**torchtriton 3.0.0**



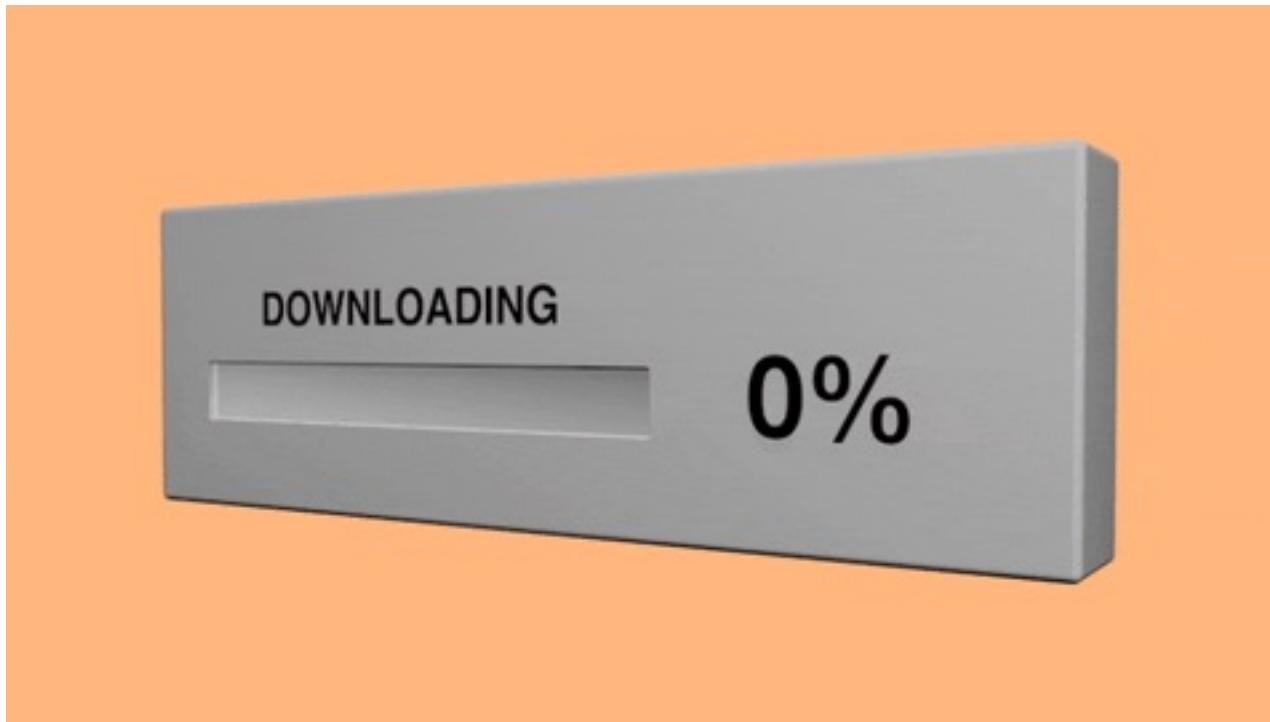
# Supply Chain Compromise of Open Source Software

## WHY



# Supply Chain Compromise of Open Source Software

## IMPACT



# Supply Chain Compromise of Open Source Software

## TAKEAWAY

- 📍 No Blind Trust
- 📍 Trust But Verify
- 📍 Shift Left

# High Level Trends in Cloud Attacks & Defenses

Cryptomining will get more popular

## SCALE

Selling of Malware on Dark Web makes advanced attacks accessible

Supply chain compromises – devastating effects

### How to Cope:

- Visibility – Real Time
- Least Permissive
- Backups

# Thank You!