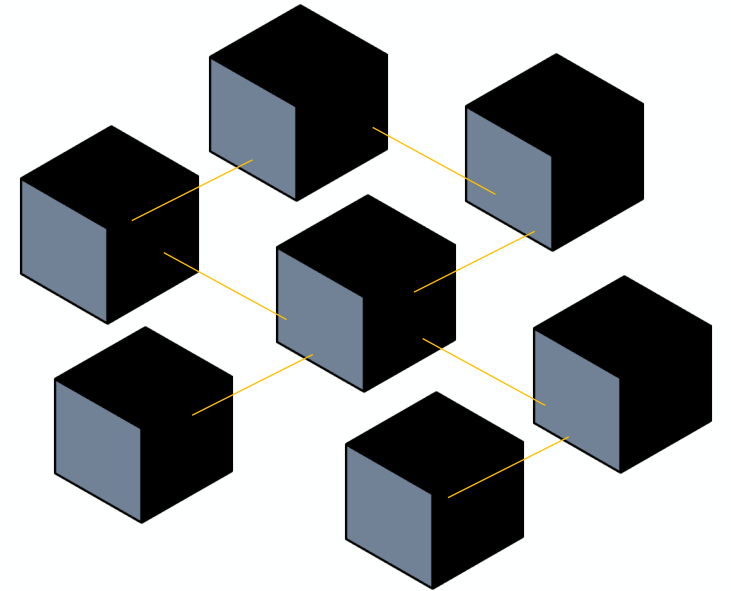


A Cross-stack Approach Towards Defending Against Cryptojacking

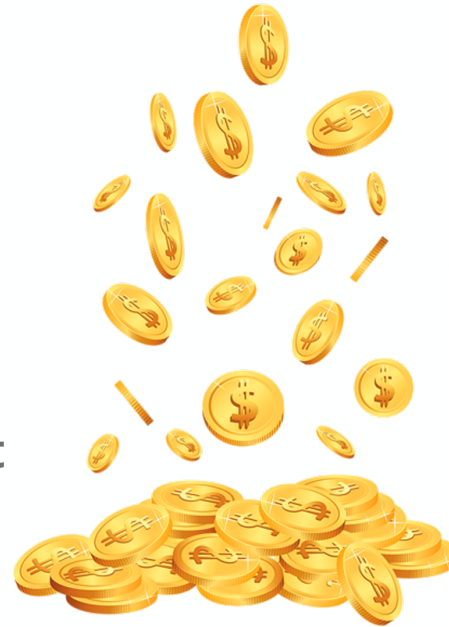
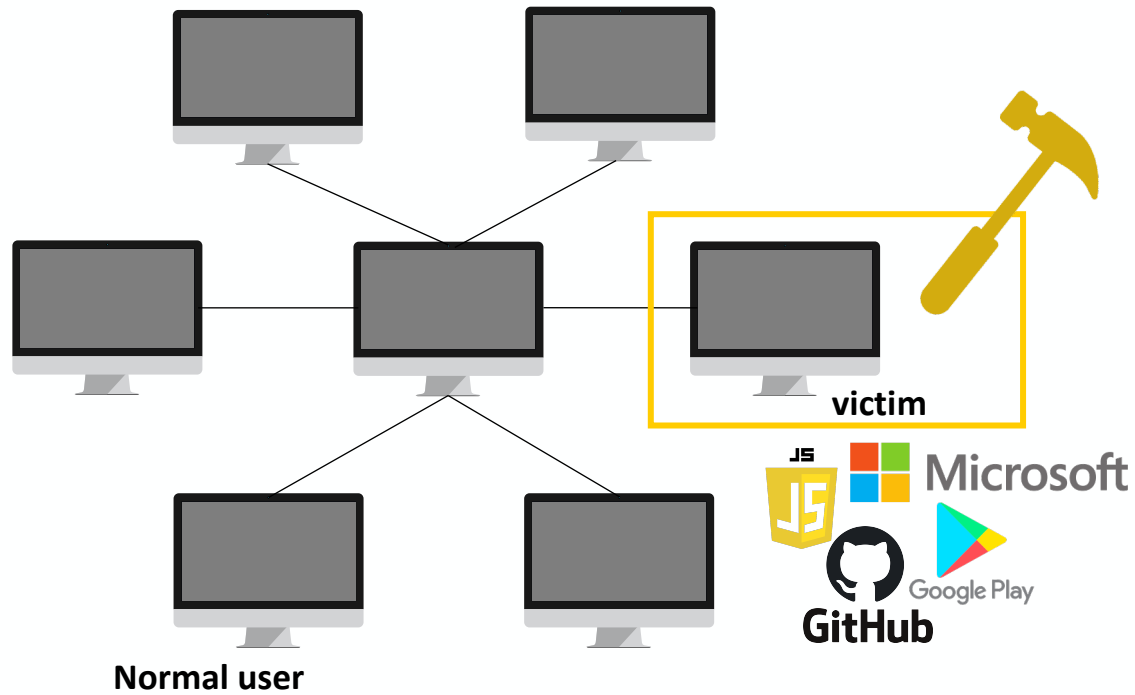
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Cryptocurrencies



Cryptojacking Attacks



Injects malicious software



Our Solution



Previous Solutions



Our Solution

Our Solution

Microarchitecture Level

Decoder

Secure Hashing Algorithms (SHA2/SHA3)

Re-order Buffer

XOR	
ADD	
...	
ROR	
SRL	

XOR	1
ADD	
...	
ROR	1
SRL	1

Rotate
Shift
XOR

Commit

Counter

Operating System Level

Scheduler

Update

WARNING

Threshold

Check

```
task_struct {  
  ...  
  rsx_count  
  ...  
}
```

thread1 thread2

100%

True Positive Rate

< 2%

False Positive Rate

50%

Throttling Rate Resiliency

< 1%

Overhead



Thank you for watching!

For more info, please check our paper in the link:
<https://ieeexplore.ieee.org/document/9170774>

