Orange
Cyberdefense

Security Maturity For All Ages

By: Leon Jacobs

Oslo – October ‘23

Hello!

Leon Jacobs
CTO Orange Cyberdefense ZA / SensePost

From South Africa ZA
18 years IT, 13 of those in Cyber Security
Previously: Sysadmin, Tier 1 ISP, Private Bank
Open-source developer, researcher, hacker.

In short: I like to hack your stuff :)

@leonjza

SensePost Team - Research Driven Conferences & Contributions

black hat®

DEFCON

HITB

TROOPERS

INFILTRATE
SECURITY CONFERENCE

https://sensepost.com/blog/

x : @sensepost
m: @sensepost@infosec.exchange
g : https://github.com/sensepost

SECTOR
Security Education Conference

@HACK

ringzerø

Locations of operation

France	90 hackers
South Africa	29 hackers
UK	8 hackers
Belgium	6 hackers
Netherlands	7 hackers
Sweden	5 hackers
Norway	5 hackers
Denmark	2 hackers
Switzerland	21 hackers

EVERYONE HAS A PLAN
TILL THEY GET PUNCHED
IN THE MOUTH.

MIKE TYSON

FIGHT MONKEY
TOP TEN

Attackers only need to be right once, defenders need to be right all the time.

Attackers only need to be right once, defenders need to be right all the time.

Attackers need to be right every time, defenders need to be right once.

Drive-by Compromise

Establish Persistence

Defense Evasion

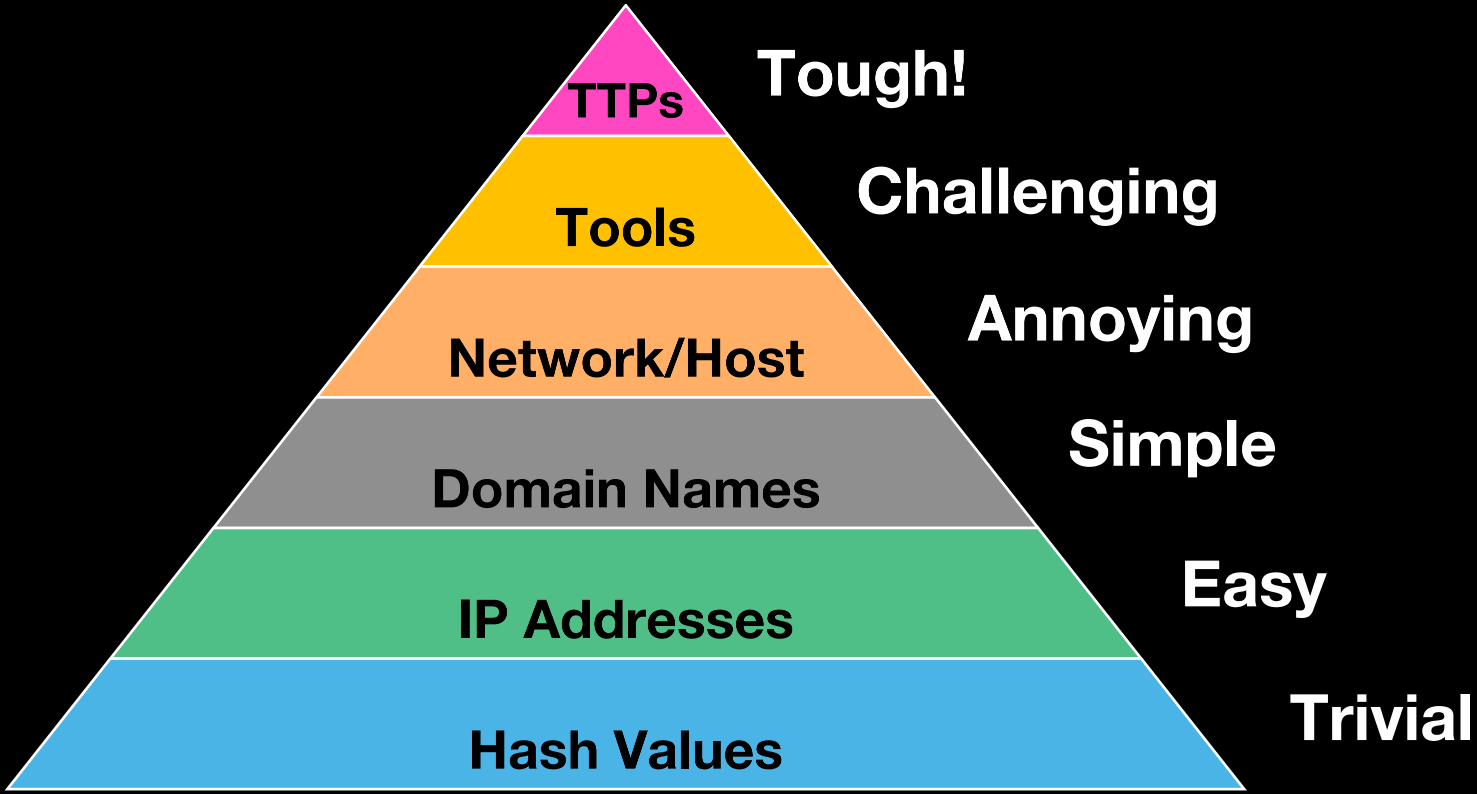
Ingress Tool Transfer

Lateral Movement

Data Exfiltration

ref: https://attackevals.mitre-engenuity.org/enterprise/turla/

David Bianco’s Pyramid of Pain



TTPs — Tough!

Tools — Challenging

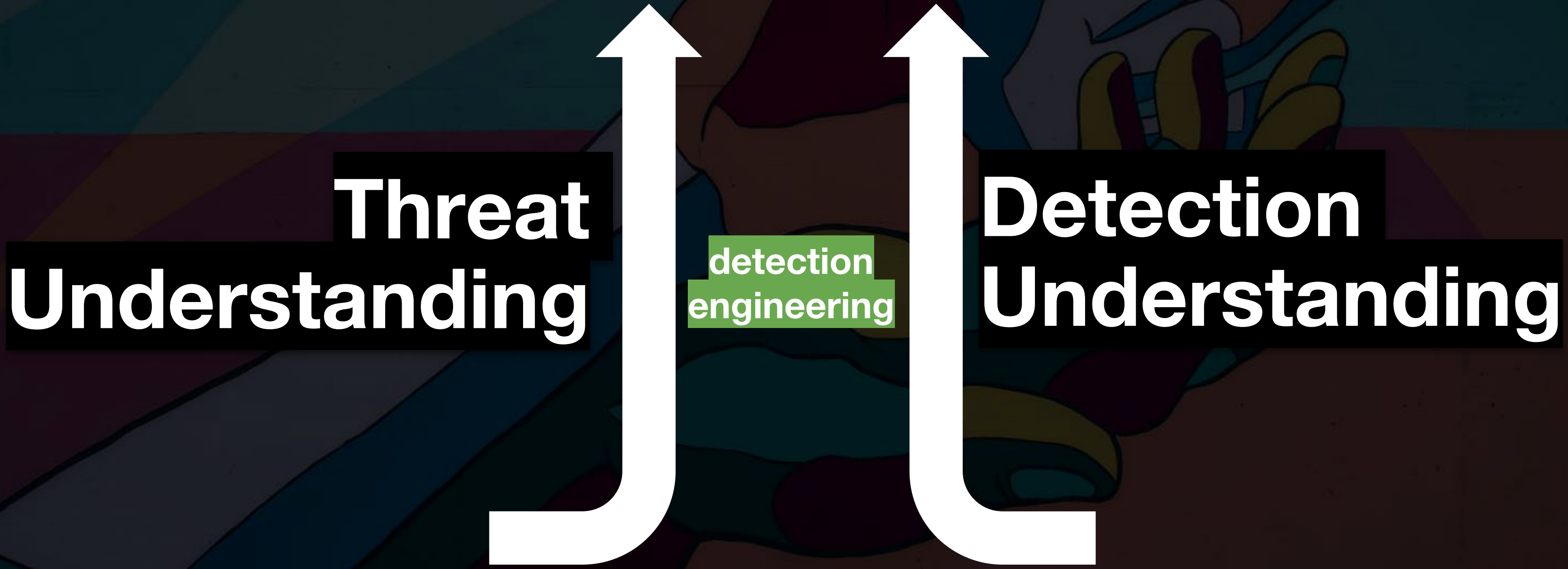
Network/Host — Annoying

Domain Names — Simple

IP Addresses — Easy

Hash Values — Trivial

Pyramid of Pain



Threat Understanding

detection engineering

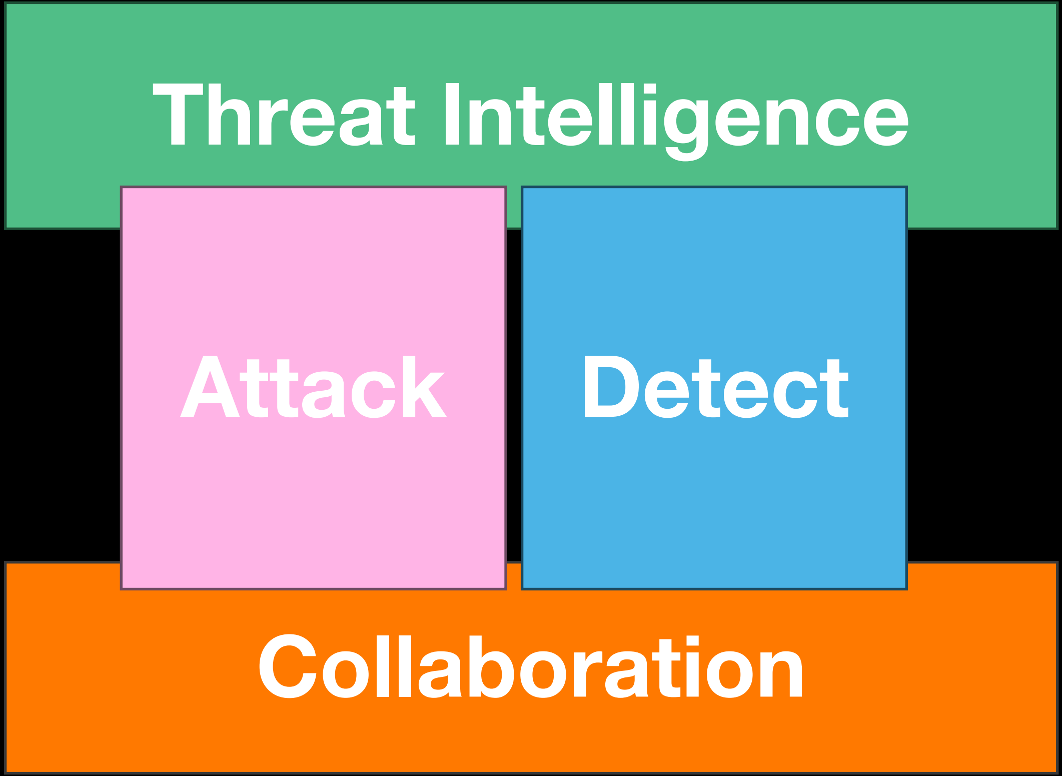
Detection Understanding

Purple Teaming

Accept that a vulnerability will be exploited, an attack will be successful and that there will be impact.

Now, test (practice) your ability to accurately detect that entire attack path.

That is purple teaming.

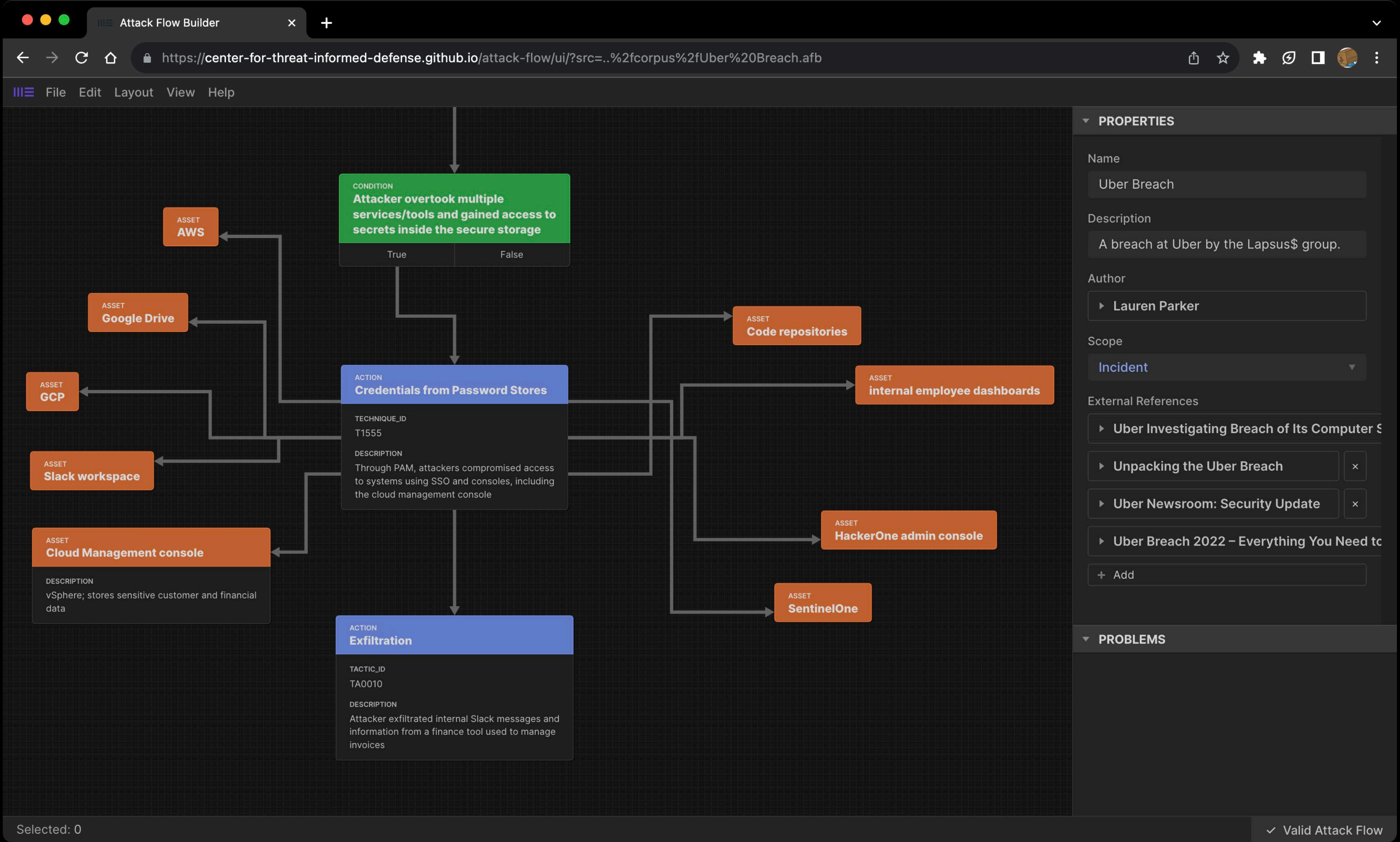


Threat Intelligence

Attack

Detect

Collaboration


Attack Flow Builder
https://center-for-threat-informed-defense.github.io/attack-flow/ui/?src=..%2fcorpus%2fUber%20Breach.afb
File
Edit
Layout
View
Help

CONDITION
Attacker overtook multiple services/tools and gained access to secrets inside the secure storage

True | False

ASSET
AWS

ASSET
Google Drive

ASSET
GCP

ASSET
Slack workspace

ASSET
Cloud Management console

DESCRIPTION
vSphere; stores sensitive customer and financial data

ACTION
Credentials from Password Stores

TECHNIQUE_ID
T1555

DESCRIPTION
Through PAM, attackers compromised access to systems using SSO and consoles, including the cloud management console

ASSET
Code repositories

ASSET
internal employee dashboards

ASSET
HackerOne admin console

ASSET
SentinelOne

ACTION
Exfiltration

TACTIC_ID
TA0010

DESCRIPTION
Attacker exfiltrated internal Slack messages and information from a finance tool used to manage invoices

PROPERTIES

Name
Uber Breach

Description
A breach at Uber by the Lapsus$ group.

Author
Lauren Parker

Scope
Incident

External References
Uber Investigating Breach of Its Computer S
Unpacking the Uber Breach
Uber Newsroom: Security Update
Uber Breach 2022 – Everything You Need tc

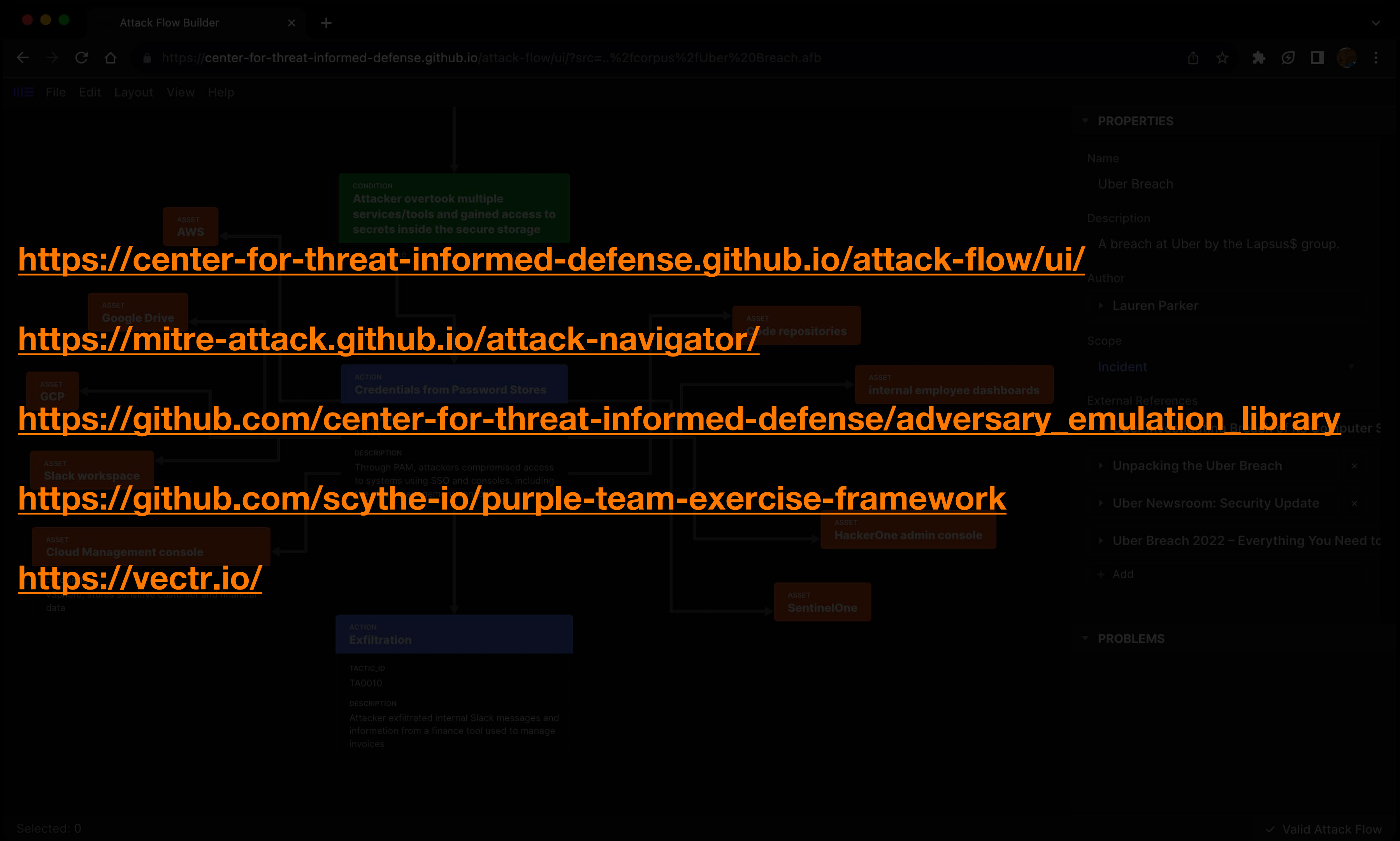
https://center-for-threat-informed-defense.github.io/attack-flow/ui/

https://mitre-attack.github.io/attack-navigator/

https://github.com/center-for-threat-informed-defense/adversary_emulation_library

https://github.com/scythe-io/purple-team-exercise-framework

https://vectr.io/



DESCRIPTION
Through PAM, attackers compromised access to systems using SSO and consoles, including

TACTIC_ID
TA0010

DESCRIPTION
Attacker exfiltrated internal Slack messages and information from a finance tool used to manage invoices

Name
Uber Breach

Description
A breach at Uber by the Lapsus$ group.

Author
Lauren Parker

Scope
Incident

External References
Unpacking the Uber Breach
Uber Newsroom: Security Update
Uber Breach 2022 – Everything You Need to
Add

Help your team turn
response into instinct.

Orange
Cyberdefense

Thank You

Leon Jacobs

e: leon@orangecyberdefense.com

x: @leonjza m: @leonjza@infosec.exchange

orangecyberdefense.com

orange™