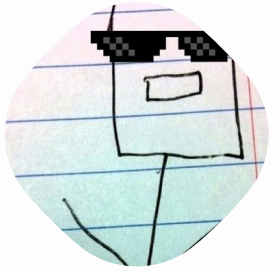
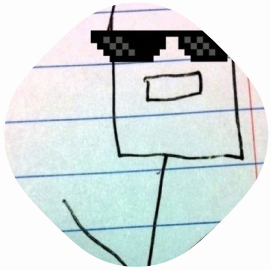

REAL
INCIDENTS
REAL
SOLUTIONS

Our Perspectives



@GHELPLEATJOM4E2

@JQJEOYRNDOANNAME



Building & Assessing Security Programs

Preparing for & Responding to Incidents

Our Story For You

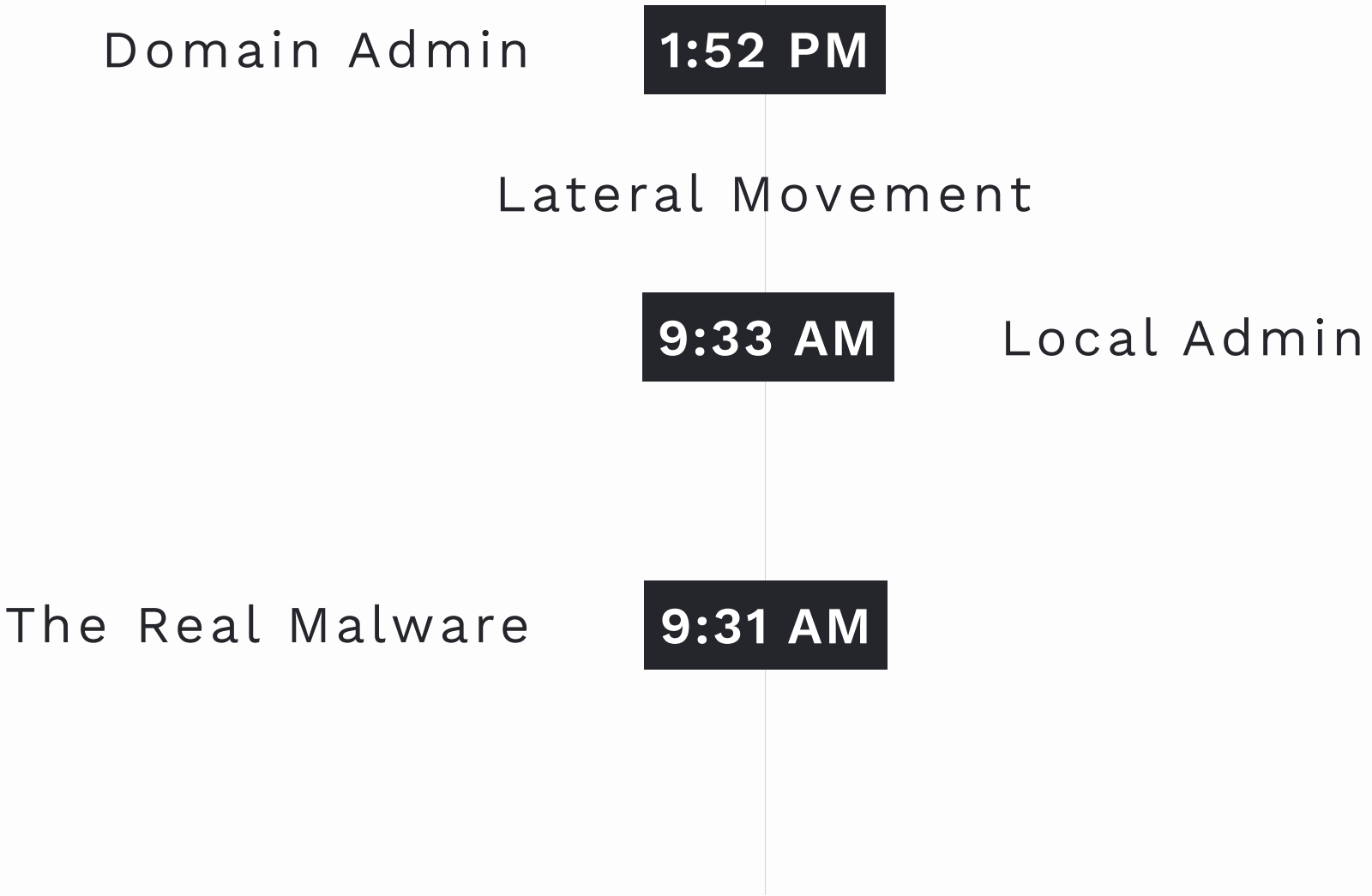
A REALISTIC ATTACK

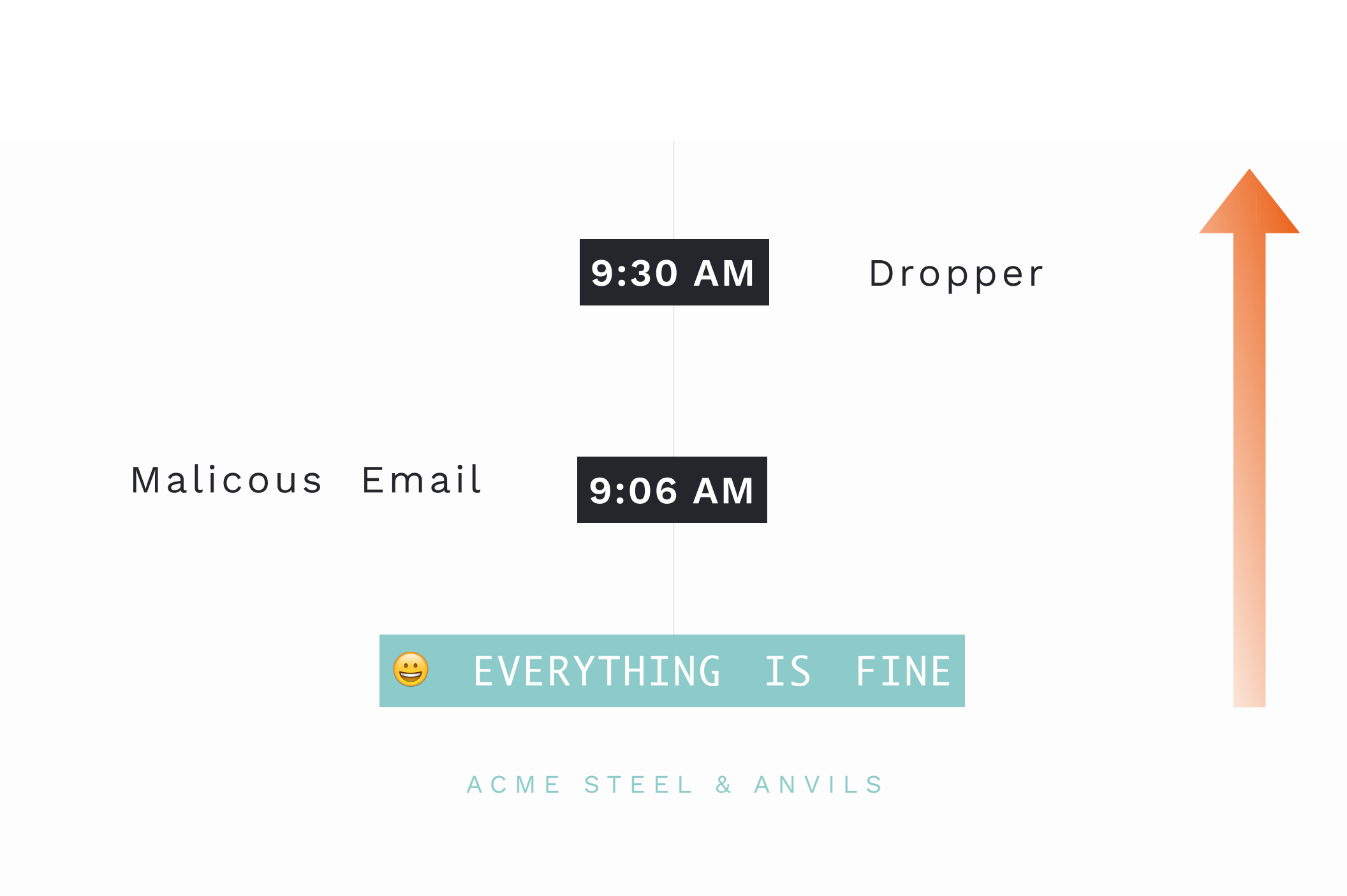
7 PM: 💩

AS&A's IP stolen by competitor

MRP Database Accessed

4:52PM

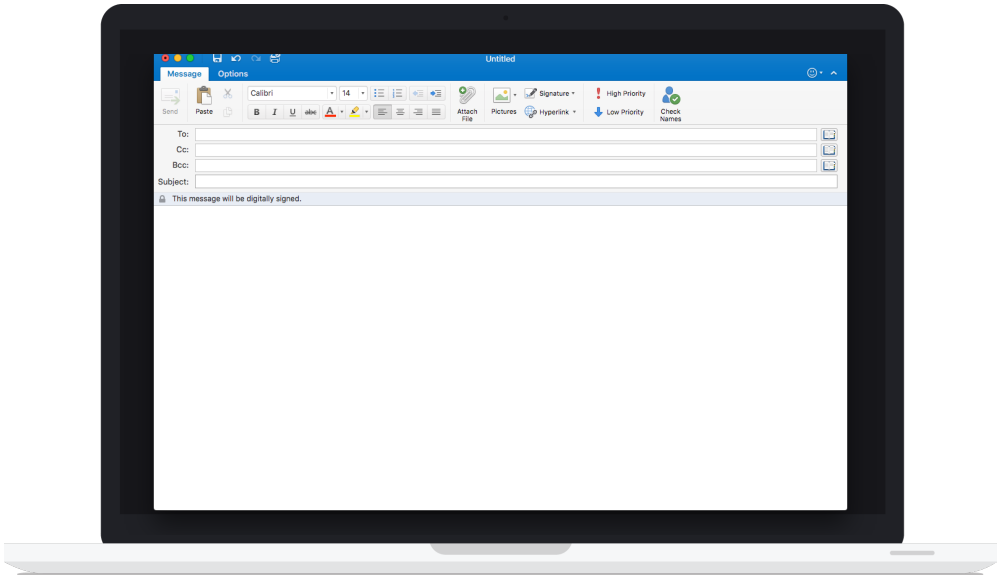

Domain Admin
1:52 PM
Lateral Movement
9:33 AM
Local Admin
The Real Malware
9:31 AM


9:30 AM
Dropper
Malicous Email
9:06 AM
😀 EVERYTHING IS FINE
ACME STEEL & ANVILS

NEXT GEN & BOURBON

Step 1
The Email

From:
Invoicing@Mining.Biz



Typical Defenses

- Anti Spam
- Mail Av
- Endpoint Av
- Sandboxing Technology
- User Awareness

Step 1
The Email Could be...

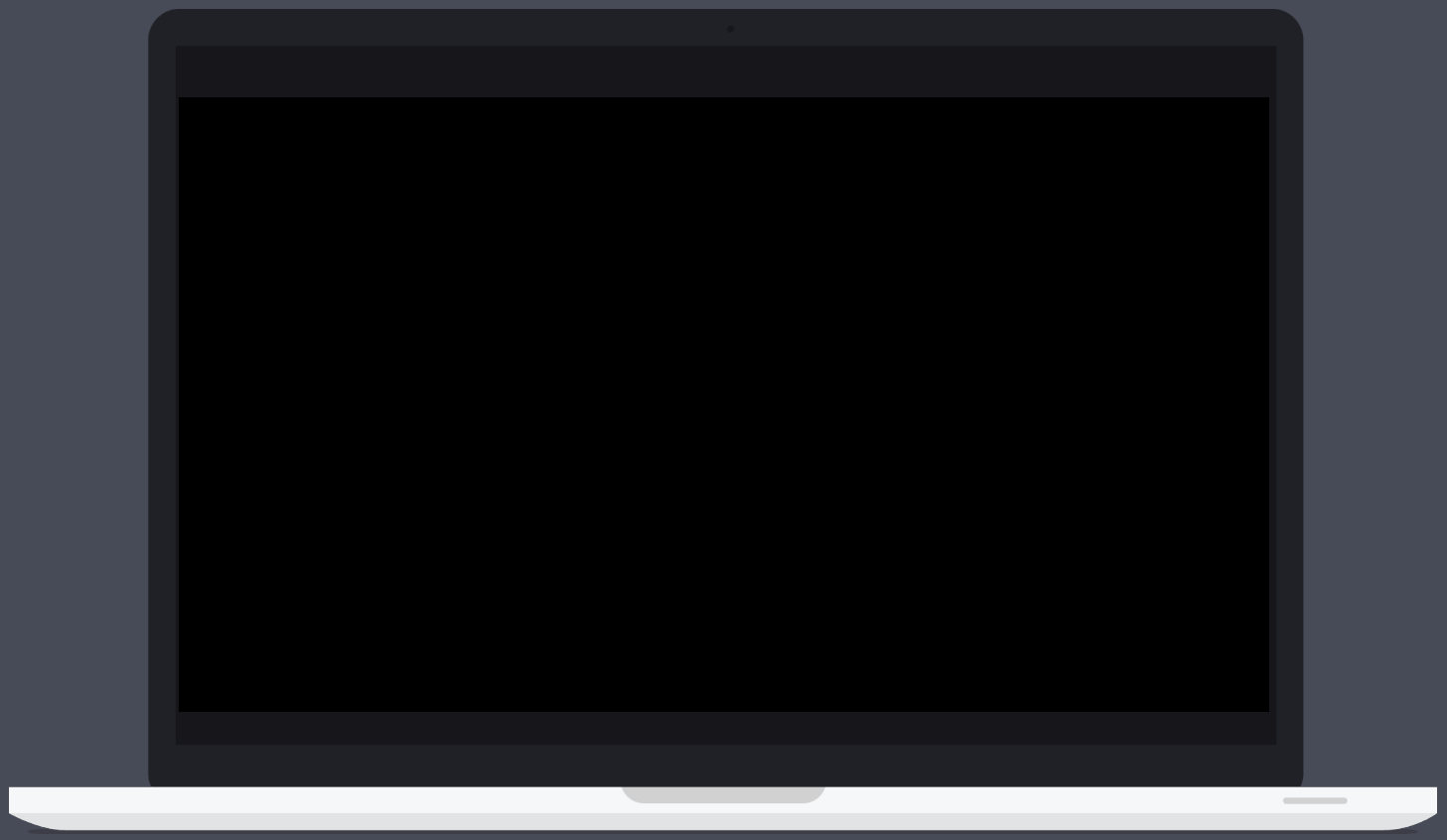
- Ceo Scam
- Malicious Link
- Attachment: Word

- Block Macros (Gpo)
- Harden Office
- Emet: Office

FREE

&

EFFECTIVE



- Click-To-Play
- Whitelist Sites For Plugins
- Deny Old Plugins
- Gpo Available 👍🏻
- Emet Me Too!

FREE

&

EFFECTIVE

- Unclassified Sites
- Recently Registered Dns
- File Type Blocking (.Zip/ Encrypted)
- Link Rewriting

Extra Config

Step 2
Dropper Fetches Malware

https://EvilPlumbing/Lol.Exe

Typical Defenses

- NGFW
- Proxy
- Endpoint AV
- Sandboxing Technology

- Dns/Proxy Stuff
- Tls/Ssl Decryption
- Disallow Exe Downloads
- Block Ads!

Extra Config

Step 3
Real Malware Runs

Credentials Harvested

Typical Defenses

- Endpoint Av
- Advanced Endpoint Things (Tm)
- Ngfw

- Regular Users.
- Vulnerability Management Basics
- Da On Workstations: Not Even Once
- Lsa Hardening
- Windows Device Guard

FREE DEFENSE

Step 4
Local Admin Privileges

?

Typical Defenses

- Everything We Said Before
- Randomize Local Admin With Laps
- Be Careful With Deployment And Logon Scripts/Gpp
- Hardening

FREE DEFENSE

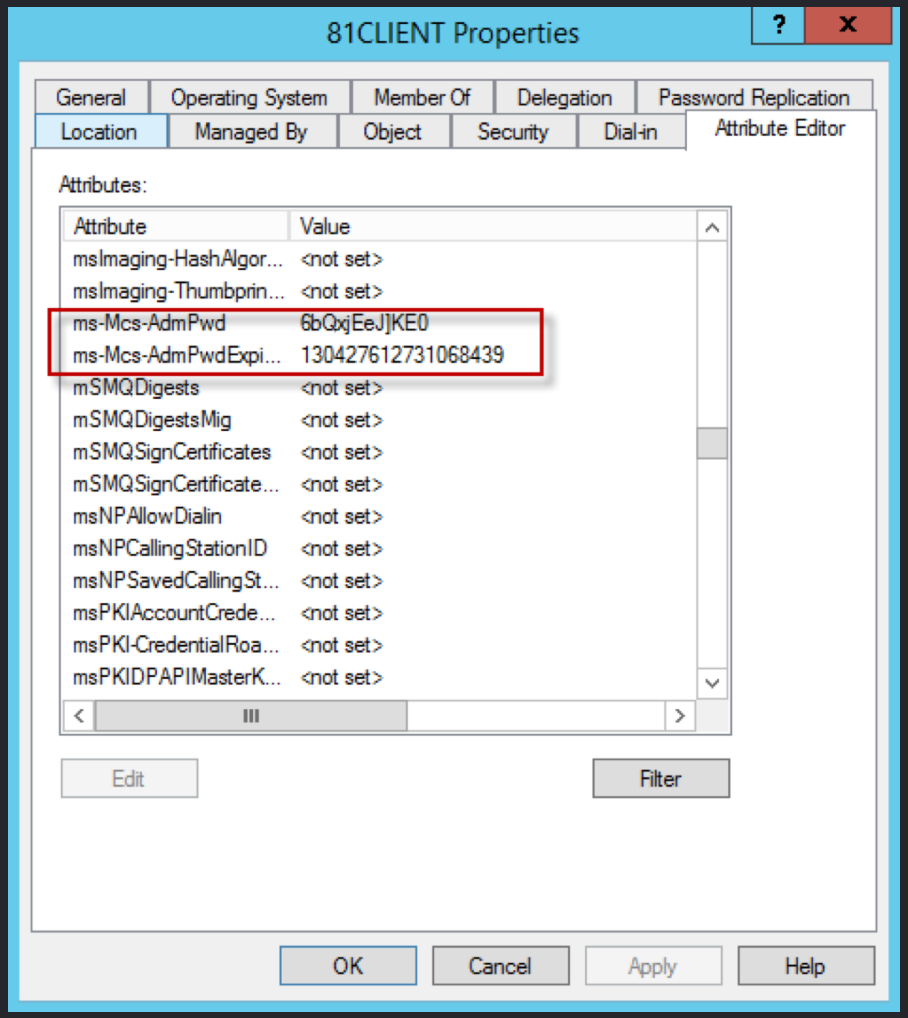
LOCAL ADMINISTRATOR PASSWORD SOLUTION

LAPS

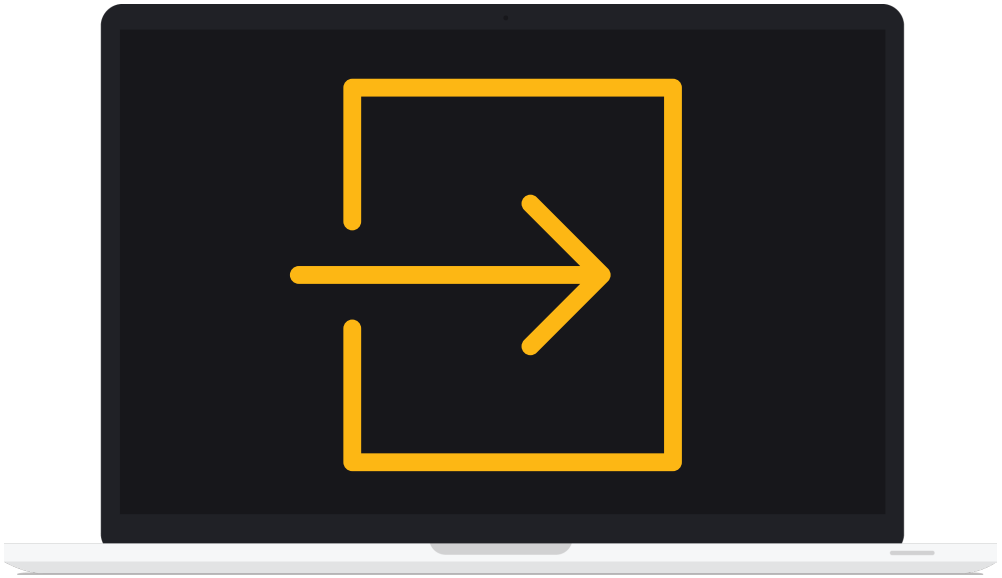
- Randomized
- Automated
- Delegated
  (ms-MCs-AdmPwd)
- FREE as in BEER
  (As in Free beer)

LOCAL ADMINISTRATOR PASSWORD SOLUTION

LAPS



Step 4.5
Lateral Movement



?

Typical Defenses

- Hardening! User Right Assignments! Yay!
- Local Accounts -> Deny All The Things
- Why U No Firewall Smb/Wmi/Netbios?

FREE DEFENSE

Step 5
DOMAIN Admin Privileges

Typical Defenses

- "We Monitor Modifications To The Domain/Enterprise Admins Group"
- "We Use Multiple Domains For Separation"

Domains are not security boundaries, forests are.
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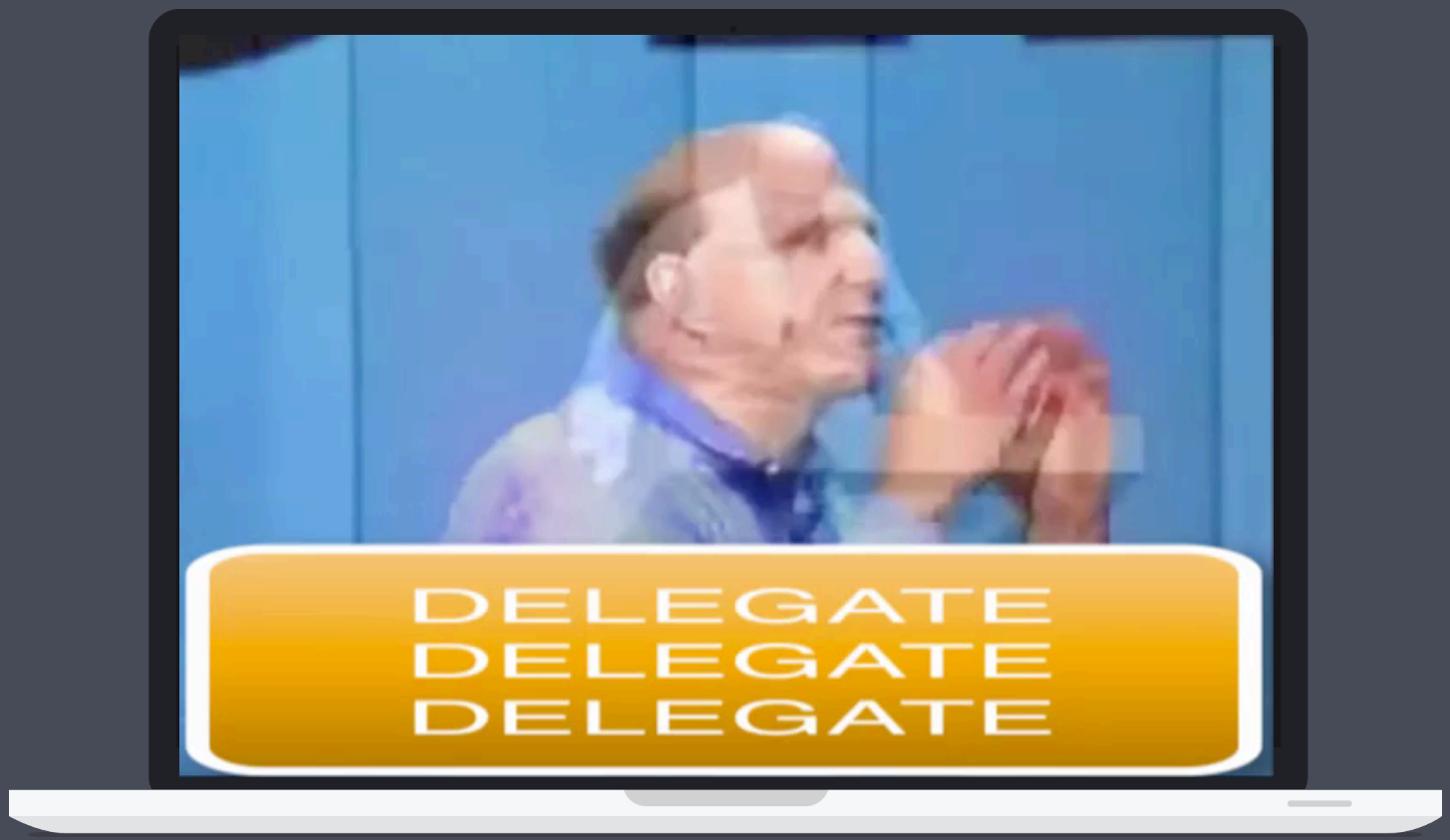
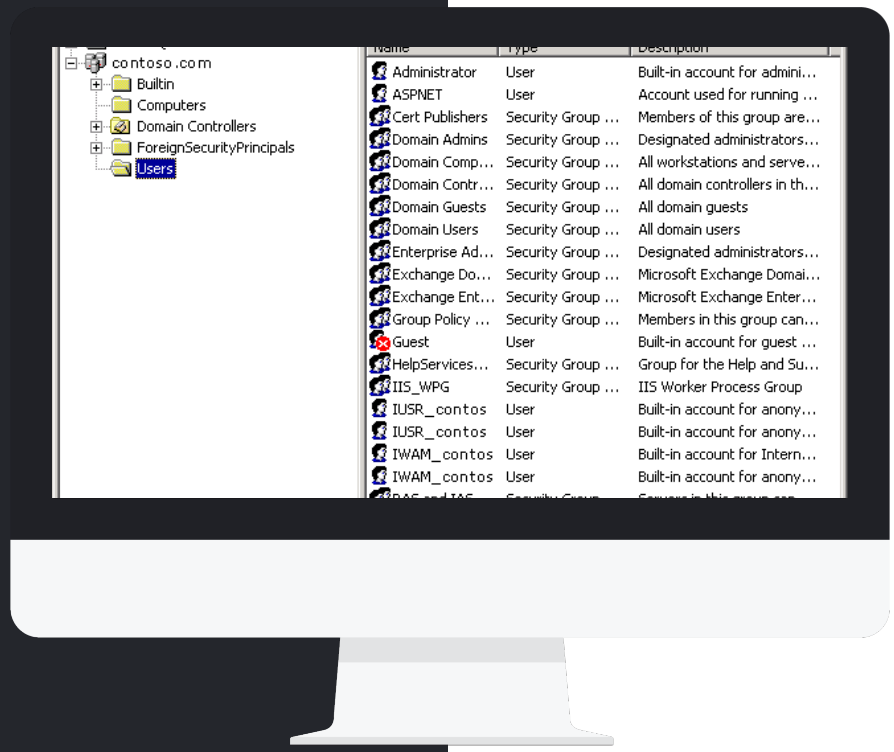
- Seriously: Separate Your Service Accounts
- Patch Domain Controllers Like Mad Max Would
- Delegate Delegate Delegate Delegate
- Dedicated Admin Boxes

FREE DEFENSE


DELEGATE
DELEGATE
DELEGATE

PRIVILEGED ACCESS WORKSTATIONS

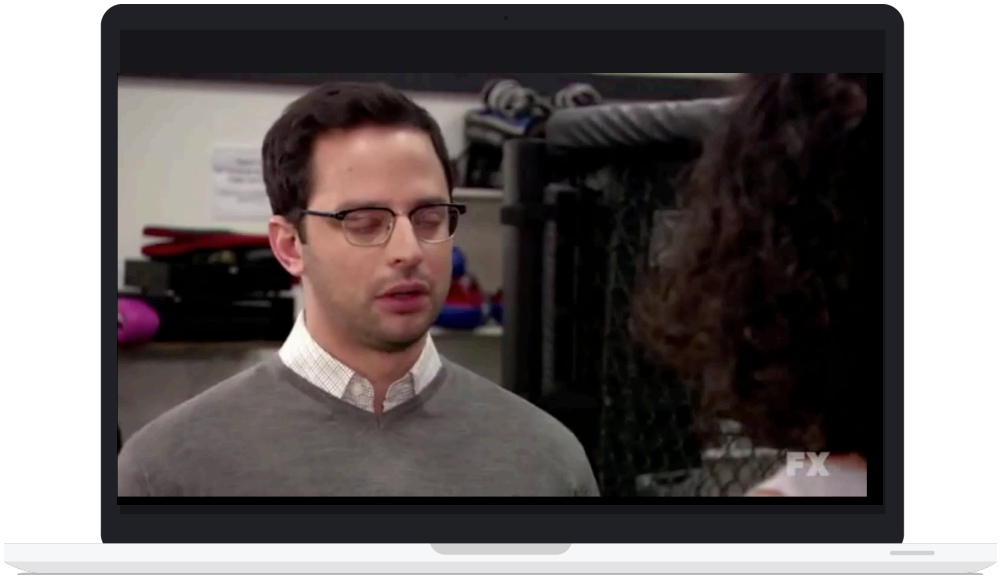


MORE INFO

https://technet.microsoft.com/en-us/library/mt634654.aspx

Step 6
MRP Database Accessed

(and Dumped)



Typical Defenses

- Hoping That Someone Dumping The Db Slows It Down Enough For Someone To Notice
- Some Network Segmentation

- Firewall That Stuff
- Encrypt Connection Strings + Use Tls
- Monitor Events & Performance

FREE DEFENSE

Step 7
All your (data) Base are belong to theM

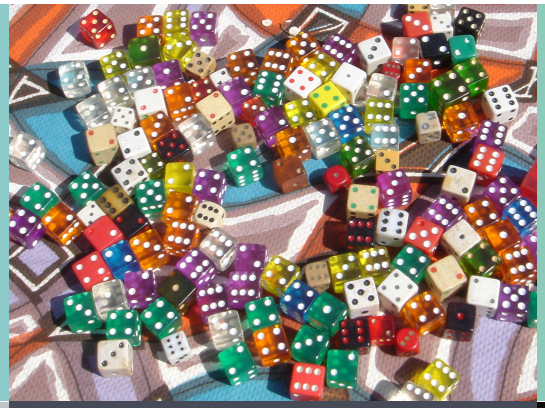
Typical Defenses

- DLP (?)
- Limited Egress Filtering

- Egress Filtering!
- No Seriously, Why Can Your Servers Connect Back To The Net?
- Proper Zoning
- Monitor Wwroots

FREE DEFENSE

SEGMENT SYSTEMS

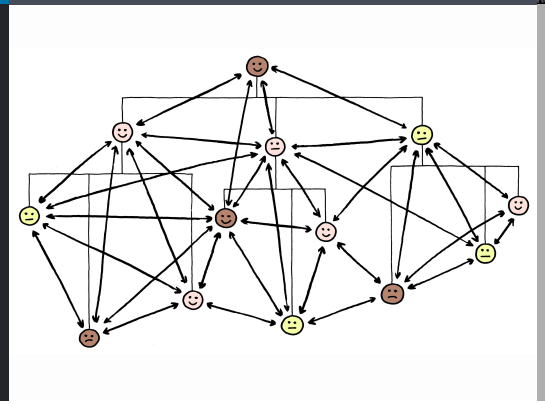


EGRESS + WEB FILTER

CHECK PRIVILEGES

RANDOMIZE PASSWORDS

DELEGATE



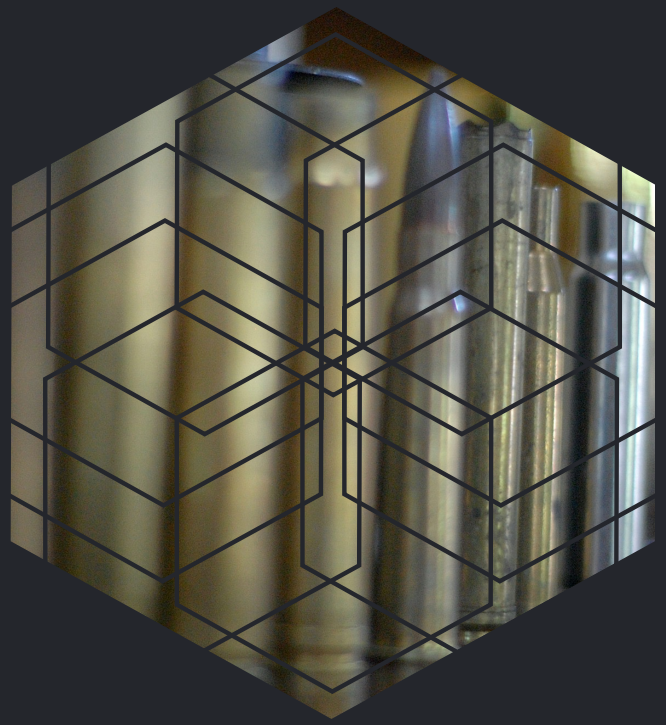
HARDEN SYSTEMS

CONCLUSION

2016–2017 CHALLENGE

LESS BULLETS

MORE SHOVELS



THANK YOU

Troll Us

@Gepeto42

@Joeynoname

Slides And Links: Https://Evil.Plumbing