Decision Analysis Applications in Threat Analysis Frameworks

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Agenda

- Background
- Framework
- Future directions
- Conclusion
- Questions

Background

Framework

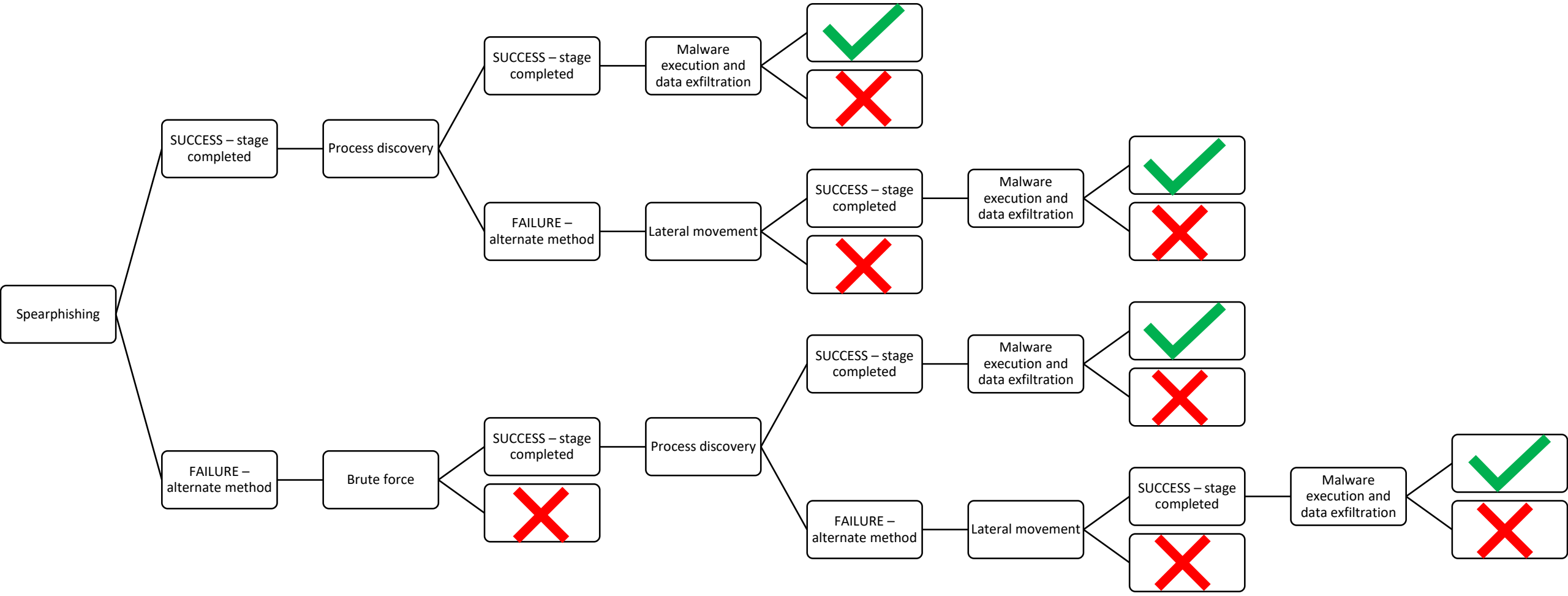
Identify top threats

Research attack methods of threats

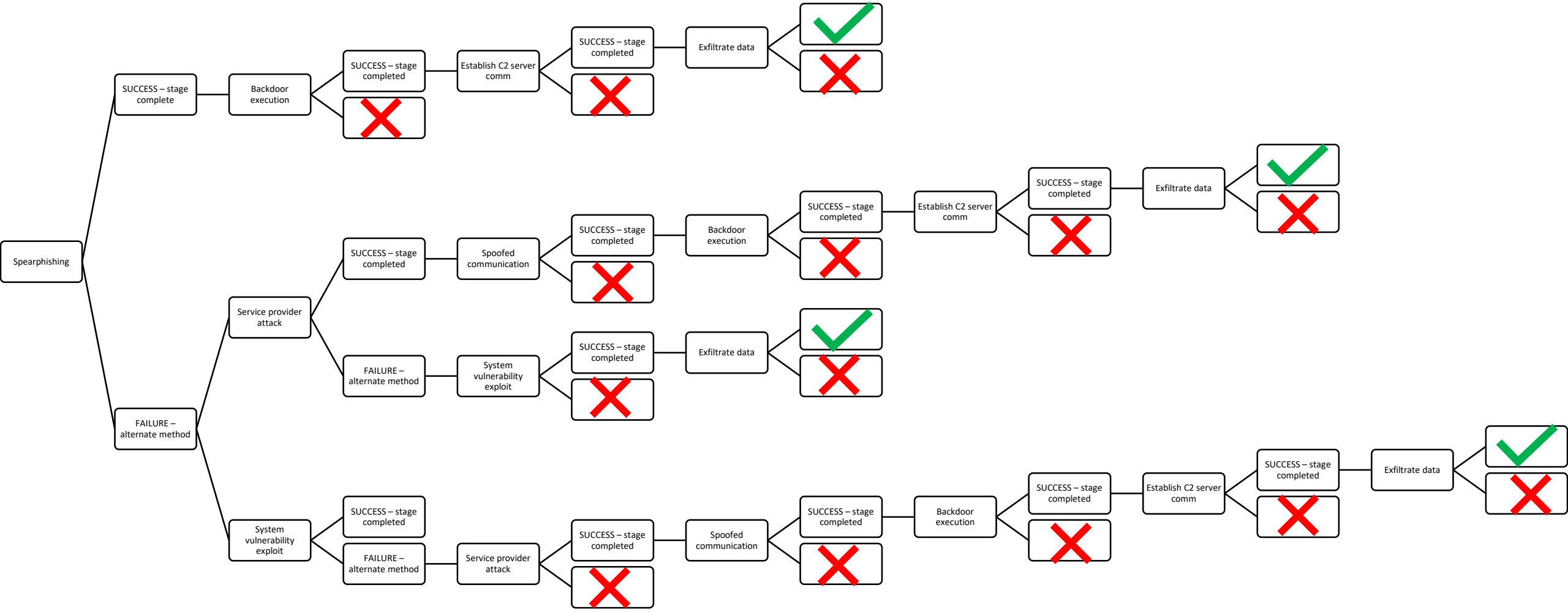
Form decision tree to understand primary and secondary attacks

Synthesize with organizational weaknesses

Turla


Spearphishing
SUCCESS – stage completed
Process discovery
SUCCESS – stage completed
Malware execution and data exfiltration
FAILURE – alternate method
Lateral movement
SUCCESS – stage completed
Malware execution and data exfiltration
FAILURE – alternate method
Brute force
SUCCESS – stage completed
Process discovery
SUCCESS – stage completed
Malware execution and data exfiltration
FAILURE – alternate method
Lateral movement
SUCCESS – stage completed
Malware execution and data exfiltration

APT10


Spearphishing
SUCCESS – stage complete
Backdoor execution
SUCCESS – stage completed
Establish C2 server comm
SUCCESS – stage completed
Exfiltrate data
FAILURE – alternate method
Service provider attack
SUCCESS – stage completed
Spoofed communication
SUCCESS – stage completed
Backdoor execution
SUCCESS – stage completed
Establish C2 server comm
SUCCESS – stage completed
Exfiltrate data
FAILURE – alternate method
System vulnerability exploit
SUCCESS – stage completed
Exfiltrate data
System vulnerability exploit
SUCCESS – stage completed
FAILURE – alternate method
Service provider attack
SUCCESS – stage completed
Spoofed communication
SUCCESS – stage completed
Backdoor execution
SUCCESS – stage completed
Establish C2 server comm
SUCCESS – stage completed
Exfiltrate data

Conclusion

- Framework can be used for prioritization of mitigations
- It can also allow for personalization of corporate policy
- It is not just for APTs!

Questions?

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