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High-Fidelity Virtual Machine Artifact Mitigation

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HIGH-FIDELITY VIRTUAL MACHINE ARTIFACT MITIGATION

Naval Postgraduate School

Goals

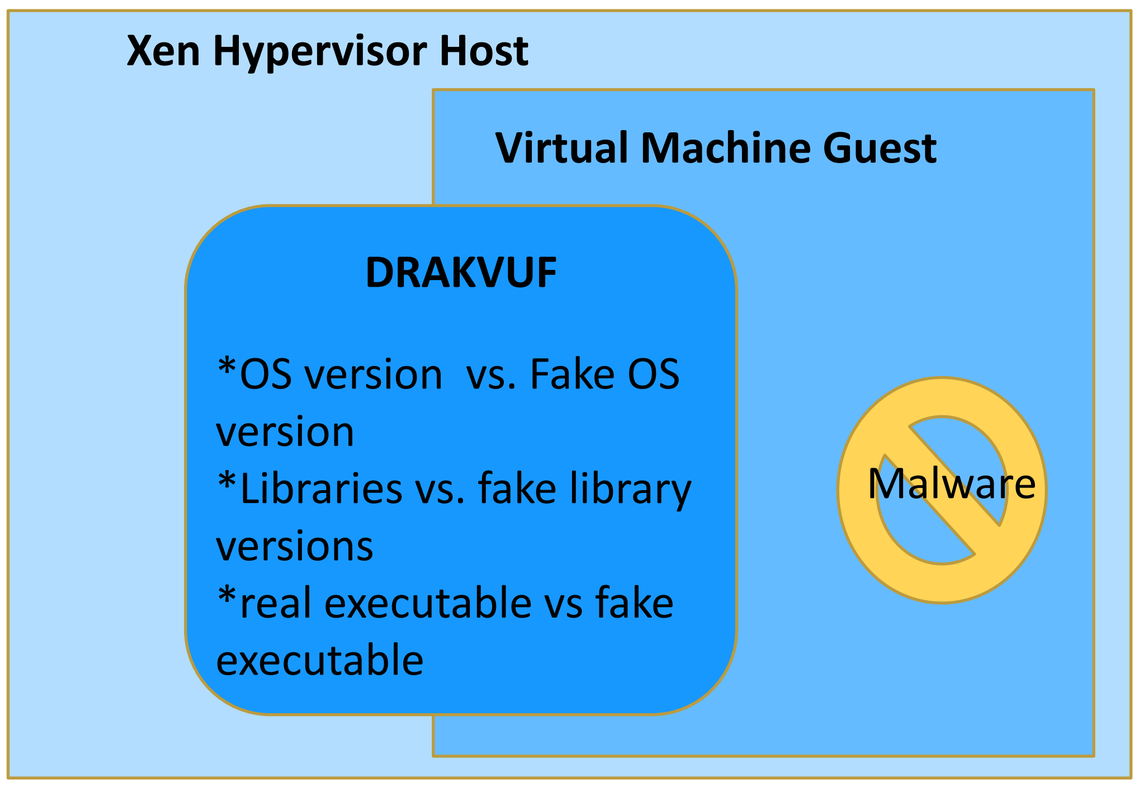
- Protection of Cloud infrastructure
- Resilience of Cloud infrastructure
- Protection from external attackers and internal attackers
- Expose attacker
- Analyze attacker methods

Malware Trends

- Intelligent, analyzes surroundings
- Based on findings, attacks using a series of vectors dependent on surroundings
- If it detects that it is being analyzed, it hides and continues to spread
- Partially automated
- Becoming more important

Methods

- Protection through obfuscation
- Protection by virtual machine introspection
- Protection at the system call kernel level

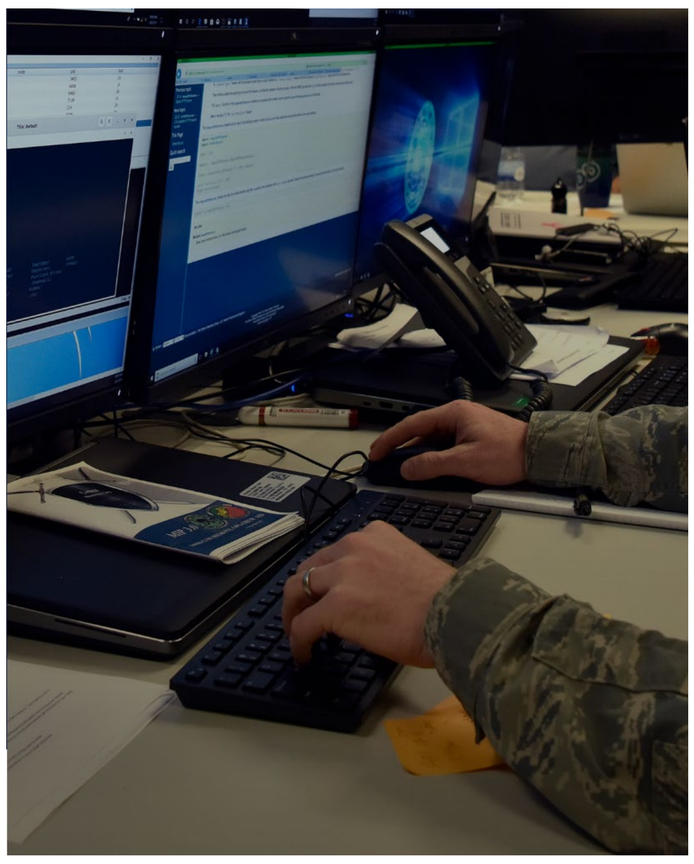


Malware is confused into exposing itself

Persistent Cyber Training Environment (PCTE)

Helps with PCTE

- Training of Malware detection and analysis
- Help with offense cyber operation munitions
- Training of low-level detection of malware
- Creation of better decision trees
- Creation of better Techniques, Tactics, and Practices



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