Making the Live Network the Honeypot

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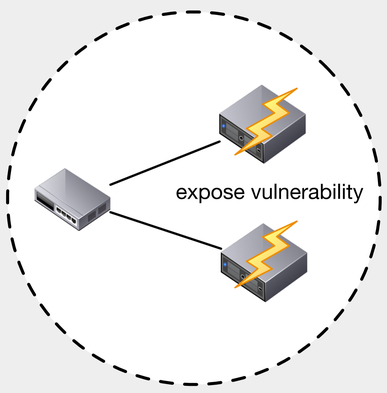
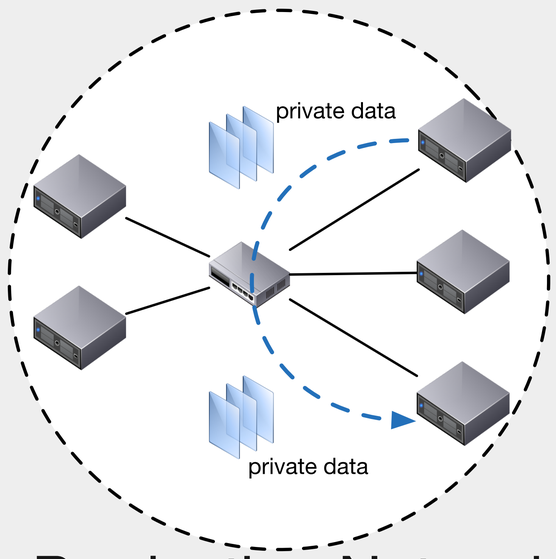
Honeypots are not identical to production networks



Dedicated Honeypot

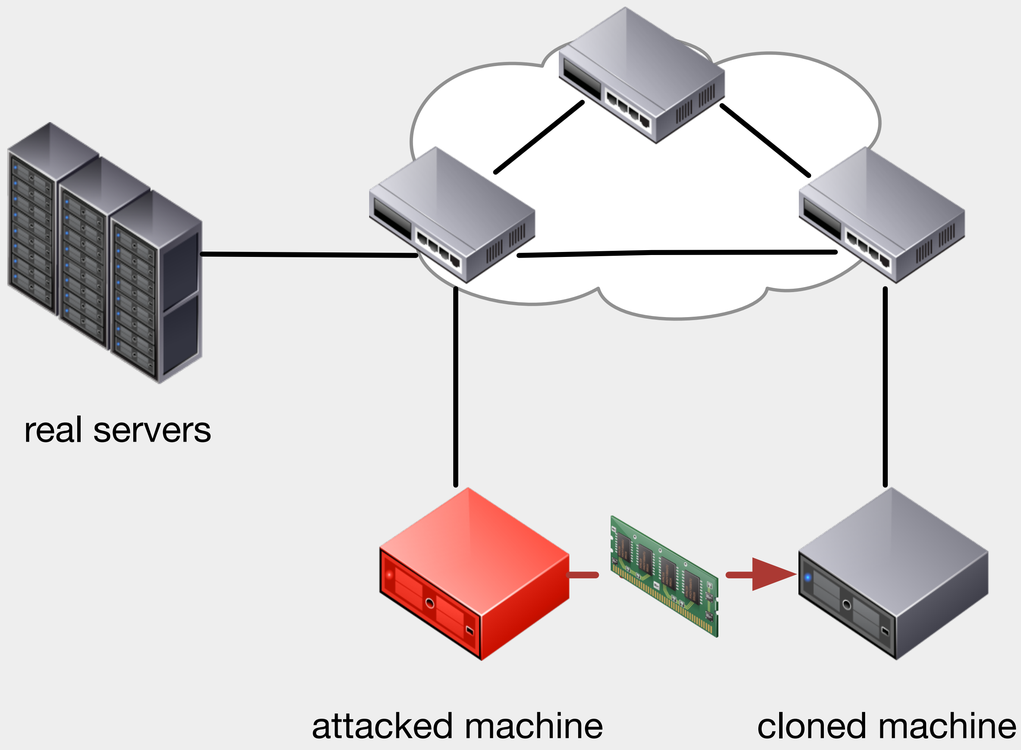
Same network?
Same applications?
Same data?



Production Network

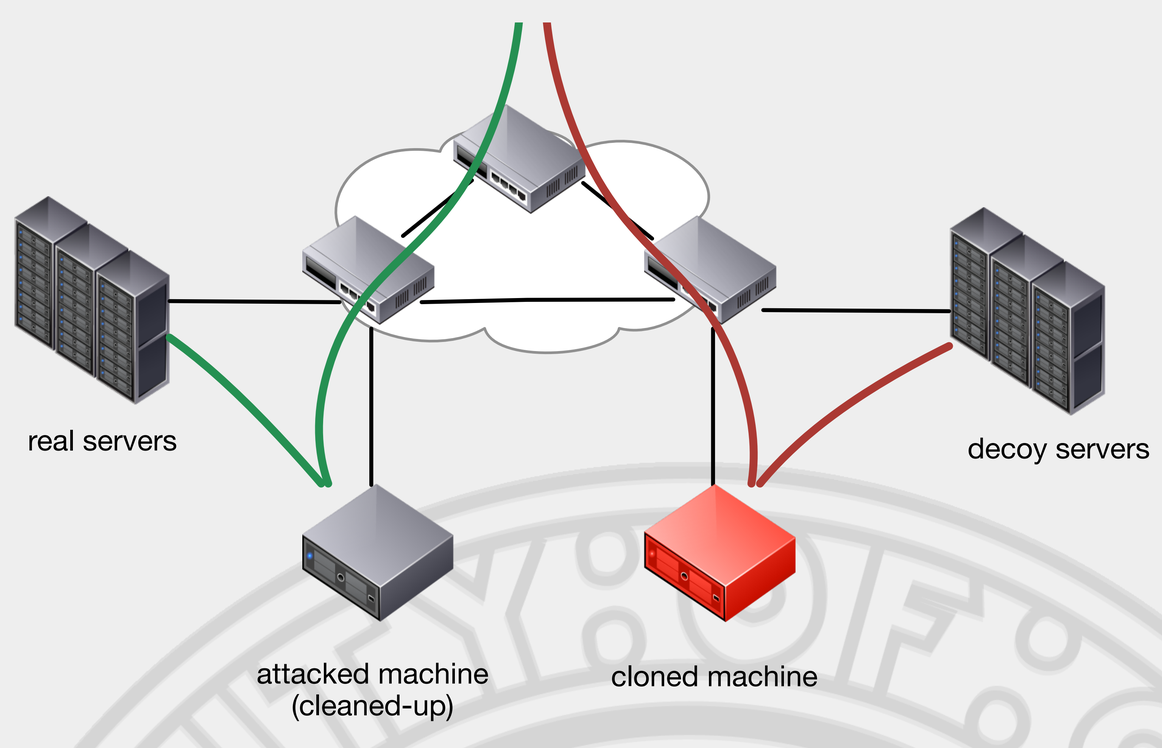
Can the production system be the honeypot?

Challenge 1: Isolate attacker



- Isolate attacker by cloning machine
- Clean-up original machine

Challenge 2: Allow clone to operate



- Create SDN 'active quarantine' of clone
- Utilize NAT to make both hosts appear as one

Challenge 3: Keep data confidential

- Feed misinformation to the attacker

Prototype

- SDN traffic dissection on top of Floodlight
- KVM offline migration

Future work

- Support live cloning
- SDN controller and hypervisor communication
- Covert operation of the system