



NDIA

Small Business Conference



The Internet



Vulnerable Software



Your Information System
(Servers)



Hackers

Hack Anatomy 101 – Discussion

WHAT IS ACTUALLY REQUIRED

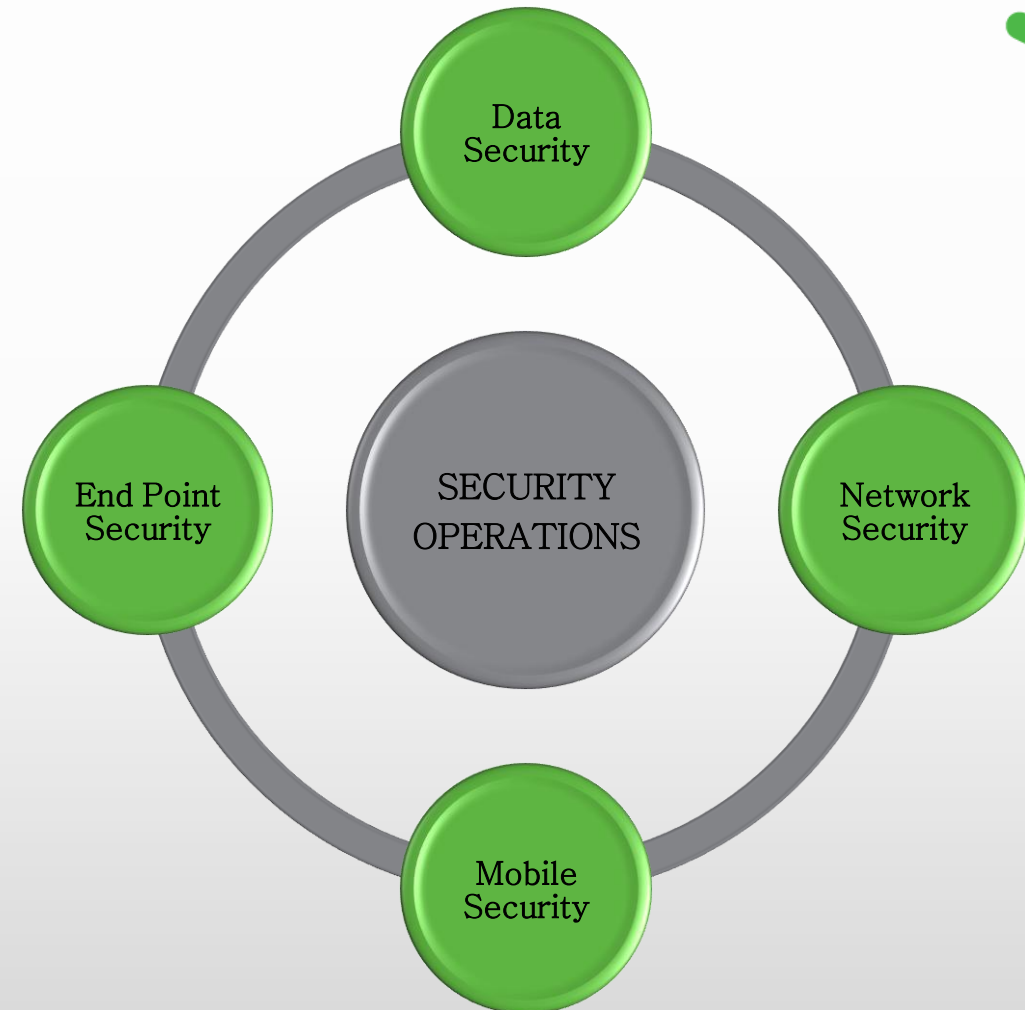


- ▶ Security Intelligence
- ▶ Actionable Information
- ▶ Expertise and Experience
- ▶ Security Operations
- ▶ Incident Handling
- ▶ Event Management

SECURITY LANDSCAPE



- ▶ Attack Vectors
- ▶ Methods to Mitigate
- ▶ Security Tools
- ▶ Why isn't security done?



SECURITY AREA – DATA



DATA SECURITY

ATTACK VECTORS	<ul style="list-style-type: none">• Poor data security policies or no policies at all• No knowledge/inventory of existing sensitive data in the organization• Lack of awareness of who is using the data	<ul style="list-style-type: none">• Lack of awareness of what the data is being used for• No sophisticated control structure to grant permissions to sensitive Data• Sensitive data on mobile and personal devices
MITIGATION	<ul style="list-style-type: none">• Catalog and inventory data• Creation of established and enforced policies around sensitive data• Use of role based access control to limit unnecessary exposure and use of data	<ul style="list-style-type: none">• Monitor the use of data by employees• Create awareness of how the loss of sensitive data can affect the company
SOLUTIONS	<ul style="list-style-type: none">• Data Loss Prevention, Encryption , Device Control	
WHY ISN'T IT DONE?	<ul style="list-style-type: none">• Budget concerns• Lack of trained talent/expertise	<ul style="list-style-type: none">• Very complex to implement• Expensive and time intensive to manage

SECURITY AREA – INFRASTRUCTURE



INFRASTRUCTURE SECURITY

ATTACK VECTORS	<ul style="list-style-type: none">• Poorly managed network appliances and servers• No/infrequent security audits and vulnerability scans (awareness of weaknesses)• Improper password management• Lack of device/application inventory	<ul style="list-style-type: none">• Weak or non existent network defense controls• Poorly coded applications• No established policies for security• No visibility as to who is doing what on the network
MITIGATION	<ul style="list-style-type: none">• Scheduled security audits• Established secure configurations for devices and applications• Encryption of passwords• Secure code adoption in software lifecycle	<ul style="list-style-type: none">• Establish the ability to view the information system "top down" and be able to drill down to examine faults and events
SOLUTIONS	<ul style="list-style-type: none">• Password/identity management, Continuous threat monitoring, Vulnerability management software, UTM (unified threat management) appliances, Code audit service, Centralized management platform, SIEM platform, Web application protection/firewall	
WHY ISN'T IT DONE?	<ul style="list-style-type: none">• Centralized management platforms are costly and difficult to implement properly	<ul style="list-style-type: none">• Security platforms "sell" simplified security but it they still require experienced resources for operations

SECURITY AREA – END POINT & MOBILE



END POINT & MOBILE SECURITY

ATTACK VECTORS	<ul style="list-style-type: none">• Poorly managed malware protection software• No ability to locate devices if they are stolen• No established or enforced AUP for devices• Sensitive data is often left "in the wild" (unencrypted)	<ul style="list-style-type: none">• Poorly configured devices can be reimaged by a thief, leaving no trace• Workers working remotely with no secure transport method to use sensitive data
MITIGATION	<ul style="list-style-type: none">• Use of malware solution that provides centralized management capability• Establish ability to remotely wipe/lock/track lost devices as standard configuration	<ul style="list-style-type: none">• Create awareness of how devices should be used• Use of secure transmission methods for remote workers (VPN, SSH)• Standardized machine images for control
SOLUTIONS	<ul style="list-style-type: none">• Malware protection suites (Symantec, McAfee, Kaspersky – no particular order), "LoJack" software for devices – bios level protection, Imaging and configuration management software (Microsoft), File and folder encryption	
WHY ISN'T IT DONE?	<ul style="list-style-type: none">• Sophisticated solutions require operations and operators to maintain configurations and provide support	<ul style="list-style-type: none">• Encryption can often become cumbersome if implemented improperly and inhibit productivity• Hard to ascertain which solution to purchase (decision paralysis)

C-Level Resources



- ▶ digitalhands.com
- ▶ iscanonline.com
- ▶ fcc.gov/cyberplanner
- ▶ csrc.nist.gov
- ▶ csoonline.com