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Why You Need to Get Hacked!

**Penetration Testing & Network Security in the Title Industry
presented by Punctual Abstract & TrustFoundry**

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Speakers

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Today's Topics

- Cyber Security - The Threat is Real
- Why You Need to Get Hacked! (On Purpose)
- Penetration Testing - What it is, How it works
- Case Study - Punctual Abstract
- Q&A



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Cyber Security - The Threat is Real

Nick Sagona, Punctual Abstract



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You've seen the headlines ...

DC homebuyers lose \$1.57 million after title company was apparently hacked

Orlando homebuyers lose \$46,000 in title company impostor scheme

You've seen the headlines ...

**Hackers impersonating mortgage and
title staffers in wealthy Texas suburb
to steal down payments**

Police in Southlake issue warning about imposters

**Real Estate Cyber Threats Increasing During
COVID-19**



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According to the FBI's Internet Crime Complaint Center

- **2019 Real Estate Cyber Crimes**
 - **Real Estate/Rental**
 - **Nearly 12K incidents**

2019 CRIME TYPES

By Victim Count

Crime Type	Victims	Crime Type	Victims
Phishing/Vishing/Smishing/Pharming	114,702	Lottery/Sweepstakes/Inheritance	7,767
Non-Payment/Non-Delivery	61,832	Misrepresentation	5,975
Extortion	43,101	Investment	3,999
Personal Data Breach	38,218	IPR/Copyright and Counterfeit	3,892
Spoofing	25,789	Malware/Scareware/Virus	2,373
BEC/EAC	23,775	Ransomware	2,047
Confidence Fraud/Romance	19,473	Corporate Data Breach	1,795
Identity Theft	16,053	Denial of Service/TDoS	1,353
Harassment/Threats of Violence	15,502	Crimes Against Children	1,312
Overpayment	15,395	Re-shipping	929
Advanced Fee	14,607	Civil Matter	908
Employment	14,493	Health Care Related	657
Credit Card Fraud	14,378	Charity	407
Government Impersonation	13,873	Gambling	262
Tech Support	13,633	Terrorism	61
Real Estate/Rental	11,677		39
Other	10,842		

According to the FBI's Internet Crime Complaint Center

- 2019 Real Estate Cyber Crime Value
 - Real Estate/Rental
 - Over \$200 Million

2019 Crime Types *Continued*

By Victim Loss

Crime Type	Loss	Crime Type	Loss
BEC/EAC	\$1,776,549,688	Employment	\$42,618,705
Confidence Fraud/Romance	\$475,014,032	Civil Matter	\$20,242,867
Spoofing	\$300,478,433	Harassment/Threats of Violence	\$19,866,654
Investment	\$222,186,195	Misrepresentation	\$12,371,573
Real Estate/Rental	\$221,365,911	Identity Theft	\$10,293,307
Non-Payment/Non-Delivery	\$196,563,497	Counterfeit	**\$8,965,847
Identity Theft	\$160,305,789	Ransomware	\$7,598,198
Government Impersonation	\$124,292,606	Denial of Service/TDoS	\$2,214,383
Personal Data Breach	\$120,102,501	Charity	\$2,009,119
Credit Card Fraud	\$111,491,163	Malware/Scareware/Virus	\$1,772,692
Extortion	\$107,498,956	Re-shipping	\$1,458,118
Advanced Fee	\$100,602,297	Gambling	\$1,128,838
Other	\$66,223,160	Health Care Related	\$975,311
Phishing/Vishing/Smishing/Pharming	\$57,836,379	Crimes Against Children	\$129,000
Overpayment	\$55,820,212	Hacktivist	\$49,589
Tech Support	\$54,041,053		
Corporate Data Breach	\$53,398,278		
Lottery/Sweepstakes/Inheritance	\$48,642,332		

Just last month, July 2020

07/14/2020

U.S. Secret Service Creates Cyber Fraud Task Force

In recognition of the growing convergence of cyber and traditional financial crimes, the U.S. Secret Service has merged two electronic and financial crimes units into a single unified network.

The newly formed **Cyber Fraud Task Force (CFTF)** will focus on investigating cyber-enabled financial crimes, such as business email compromise schemes and ransomware attacks. The mission of the CFTF is to prevent, detect, and mitigate complex cyber-enabled financial crimes, with the goal of arresting and convicting the most harmful perpetrators.

"The creation of the new Cyber Fraud Task Force (CFTF), will offer a specialized cadre of agents and analysts, trained in the latest analytical techniques and equipped with the most cutting-edge technologies," said Michael D'Ambrosio, assistant director of the U.S. Secret Service. "Together with our partners, the CFTFs stand ready to combat the full range of cyber-enabled financial crimes. As the Nation continues to grapple with the wave of cybercrime associated with the COVID-19 pandemic, the CFTFs will lead the effort to hold accountable all those who seek to exploit this perilous moment for their own illicit gain."



Real estate transaction crimes are NOT the only Cyber Crimes that threaten your title agency

- **Your operation could be at risk for:**

- **Corporate Data Breach:** A leak or spill of business data that is released from a secure location to an untrusted environment. It may also refer to a data breach within a corporation or business where sensitive, protected, or confidential data is copied, transmitted, viewed, stolen or used by an individual unauthorized to do so.
- **Malware/Scareware/Virus:** Software or code intended to damage or disable computers and computer systems. Sometimes scare tactics are used by the perpetrators to solicit funds.
- **Ransomware:** A type of malicious software designed to block access to a computer system until money is paid.
- **And more...**

**Cyber Security at your title agency is
CRITICAL
to protect
YOUR CUSTOMERS
&
YOUR OPERATION**



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You Need to Get Hacked (on purpose) by Conducting a Penetration Test



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A Penetration Test Will

- Test your system's vulnerabilities
- Find your security flaws
- Alert you to fix them before Hackers find them

Penetration Testing – The Nitty Gritty

Alex Lauerman, TrustFoundry



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What is Penetration Testing?

- **Simulated attack**
 - Goal based to simulate a real attack
 - Not an audit

Different Types of Penetration Testing?

- **Network**
 - External Network
 - Internal Network
- **Application**
 - Web Application (including APIs)
 - Mobile Application
- **Social Engineering**
 - Email
 - Phone
- **Red Team**
 - Can encompass all of the above

How is Penetration Testing Performed

- **Planning**

- Kickoff call to discuss approach and agree upon rules
 - Testing restrictions
 - Whitelist testing IPs
- Discuss or convey information
 - Evasive vs non-evasive testing
- The approach to how much information is conveyed is sometimes referred to as “blackbox/greybox/whitebox”

- **Automated tools perform basic analysis**

- Finds low hanging fruit quickly
- Only performing this step is called a Vulnerability Assessment, which is not a penetration test

How is Penetration Testing Performed

- **Manual testing**
 - Analyze each listening service for vulnerabilities
- **Reporting**
 - Most companies deliver results as a PDF

What does Penetration Testing Identify?

- **Anything that would be of value to an attacker**
 - Misconfigurations
 - Sensitive information accidentally exposed
 - Weak credentials
 - Technical vulnerabilities

How do I Find a Penetration Testing Provider

- **Speak with multiple vendors**
 - Get referrals, especially from someone who understands penetration testing
 - Evaluate the skill level of the company and consultants
 - Review company information (blog, LinkedIn profiles, etc.)

Part of an Overall Security Program

- Security is not a one-step process

Case Study: Punctual Abstract

Ted Woloszyk, Punctual Abstract



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Security & Working with Vendors

- I know from personal experience...
- **Security matters at every touchpoint in title production chain**
 - Even though title evidence is public record, it's pulled together all in one place that makes it attractive to criminals
 - Minimize your liability & risk
 - Professional business practices in security indicates professionalism across the board

Punctual Abstract: Who We Are

- **A national leader in title evidence research**
 - Millions of title abstracts performed since 1993
 - Based in New Orleans metro
 - Searches performed nationwide
 - Boots-on-the-ground & online
 - Fully examined product

Punctual Abstract: What We Do

- **Residential Searches**

- Current Owner (refinance, home equity, loan modification, credit risk and tax sales)
- Two owner (pre-foreclosure)
- Full Abstract (buy/sell & REO)
- Custom Searches

- **Commercial Search Examples**

- Cell phone tower, shopping mall, hotel, levee, DOT

Punctual Abstract: Security Steps We've Taken

- SOC 1 Type 1 Certified
- Working on SOC 2 Certification
- Technologically advance, IT staff of 8
- Integrates with most closing software platforms
- Performs periodic penetration tests
- Trains our staff to identify & delete suspicious emails
- System flags fraudulent emails made to appear internally generated but comes from outside sources

Penetration Test - How to Prepare

- **External Network Penetration Test**

- Provide your IP Address(es) to the Penetration Tester
 - IP is a set of numbers that are your internet connection's address
 - Other than that, there's no other prep
 - Additional information will need to be provided for
 - Internal Testing
 - Social Engineering
 - Phishing

Penetration Test Results

- **Address the issues found, you may need IT help to do this**
 - Close up gaps
 - Repair any vulnerabilities
- Run the test again
- Fix issues
- Keep doing it until you get a test back with no real vulnerabilities

Penetration Test

- **What to expect:**
 - That's how we knew they had started the simulated hack!
 - We asked them to stop
 - We addressed the issue
 - Started again

What the Penetration Test Might Find

- **Hardware & Software Concerns**
 - **Outdated:**
 - equipment
 - firmware
 - software
 - **Open Ports or other access**

How Often to Perform a Penetration Test

- **Ideally: Every Quarter**
 - **If Possible: Every Quarter**
 - **At least: Yearly**

QUESTIONS?



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