

Greccs

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# Hacking Your Way into an Infosec Career

# Agenda

- Introduction
- Limited Undergrad Infosec Programs
- Overarching Principle
- Transition Frameworks
- Catalysts
- Discipline Examples
- Career Exploit Kit
- Conclusion

# Introduction

- Present Some Basic Ideas
- Open Forum for Discussion
- Add Your Thoughts
- I'm Taking Notes

# Limited Undergrad Programs

- Infosec Courses Spotty & Usually Spread Out Amongst Traditional Programs
  - Encryption -> Math
  - Network Security -> Electrical/Computer Engineering
  - Application Security -> Computer Science
- Top Engineering Schools ... Limited Programs
- Conclusion
  - Have to Enter Workforce & Hope to Get Infosec Job
  - Most Will End Up Getting Non-Infosec Position
  - Have to Pick Up Skills on Own

# Overarching Principle

- Pick Goal
- Create Plan for How to Achieve Goal
  - Specific Measurable Tasks
  - Due Dates
- Measure Success Against Plan
  - Revisit Often
  - Tasks Completed by Due Dates?
  - Update Plan if Needed

# Transition Frameworks

- Niche Transfer Method
- Market Demand Method
- Broad Transfer Method

# Transition Frameworks

## Niche Transfer Method

- Process
  - Apply Security to Current Job
  - Become a Security Expert within that Niche
  - Transfer into Doing Security Niche Full Time
  - Continue to Specialize or Expand into Other Adjacent Areas
- Career Stage
  - Any Level Professional

# Transition Frameworks

## Market Demand Method

- Process
  - Research Infosec Niches Where High Demand/Low Supply
  - Apply/Acquire High Demand Position
  - Continue to Specialize or Expand into Other Adjacent Areas
- Exaggerated Example
  - Pen Testing: 100 People Apply for Every 1 Position
  - FISMA C&A: 1 Person Applies for Every 100 Positions
- Career Stage
  - Low- or Mid-Level Professional



# Transition Frameworks

## Broad Transfer Method

- Process
  - Spend 2 Years Doing Networks, 2 Years Being SA, 2 Years Programming, 2 Years Being a DBA, etc. Trying to Do It with Security in Mind
  - Apply/Acquire General Infosec Position
  - Continue to Specialize or Expand into Other Adjacent Areas
- Career Stage
  - Low- or Mid-Level Professional

# Transition Frameworks

- Other Methods?

# Catalysts

- Immediate Activities
- Ongoing Activities

# Catalysts

## Immediate Activities

- Masters in Infosec
- University Certificate Programs
  - GWU, GMU, ...
- Certifications
  - Base
  - Specialization in Your Niche
- Mentorship
  - Find Someone Doing What You Want to Do and Ask them to Mentor You
- Pick Up Skills on Own
  - Volunteer for Security-Related Internships
  - Own Lab/Test Security Tools Hear About
  - Break Things/Put Them Back Together

# Catalysts

## Ongoing Activities

- Regularly Publish
- Take Part in Infosec Community
- Continually Learn
- Reevaluate Certifications
- Get Advised
- Reevaluate Goal & Plan for Next Step

# Catalysts

## Ongoing Activities

- Regularly Publish
  - Social Network (Twitter, Facebook)
  - Blog (your own, your company's)
  - Create Newsletter or Write for One
  - Submit Articles to Online/Offline Publications
  - Take Part in Conference CFPs

# Catalysts

## Ongoing Activities

- Take Part in Infosec Community
  - Local / Virtual
  - Attend/Present at/Help Organize Meetups/Conferences
  - Take part in Email Lists/Forums
  - Social Media (Twitter, FaceBook)
  - Blog for Community Site
  - Mentor

# Catalysts

## Ongoing Activities

- Continually Learn
  - Masters/Certificate Cohort Programs
  - Pick Topic & Setup Virtual/Local Learning Groups
  - Read Security Books
  - Listen to Podcasts
    - General: Crypto-Gram, Network Security Podcast, PaulDotCom, StormCast, SecuraBit, Security Justice, Security Now, Social-Engineer.Org Podcast, ...
    - Specialized: CyberSpeak (forensics)
    - Non-Security: Cloud Computing, Windows, Mac, ...
  - Keep Up with Infosec News (RSS/Twitter)
  - Subscribe to/Read Magazines



# Catalysts

## Ongoing Activities

- Reevaluate Certifications
  - Gain Relevant Certifications
- Get Advised
  - Personal Board (mentor, coach)
- Reevaluate Goal & Plan for Next Step
- Other Activities?

# Discipline Examples

- Software Developer
  - Bio: Traditional Programmer or Web Developer
  - Goal: Migrating from Developer Role into Application Pen Tester
  - Actions
    - Learn & Apply Secure Coding Principles in Job
    - Obtain GISF/GSEC & GSSP
    - Actively Search Application Pen Tester Position

# Discipline Examples

- System Administrator
  - Bio: Windows, UNIX, or Linux Administrator
  - Goal: Migrate from Administrator into Penetration Testing
  - Actions
    - Learn How to Harden & Test Systems Managed
    - Obtain Security+ & GCWN
    - Actively Search for Penetration Testing Job

# Discipline Examples

- Manager
  - Bio: Senior Person Managing IT Projects
  - Goal: Manage Corporate Security Audit Team
  - Actions
    - Obtain GISP, GSLC, & GCPM
    - Actively Search for Security Manager Positions

# Career Exploit Kit

Infosec Career Exploit Kit/Cheatsheet

	Create Plan/Goals	Measure Success
<b>Plan a la Transition Frameworks/Immediate Activities</b> (e.g., generally have intermediate due dates for each task over the next year)		
<b>Ongoing Activities</b> (e.g., goals set by month or year)		
Regularly Publish		
...		
Take Part in Infosec Community		
...		
Continually Learn		
...		
Reevaluate Certifications		
...		
Get Advised		
...		
Reevaluate Goal & Plan for Next Step		

## Instructions

- Print out, complete, and hang on refrigerator.
- Revisit often and tick items as you accomplish them or update goals as appropriate.

# Conclusion

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- Discipline Examples
- Career Exploit Kit

Let's Discuss Further