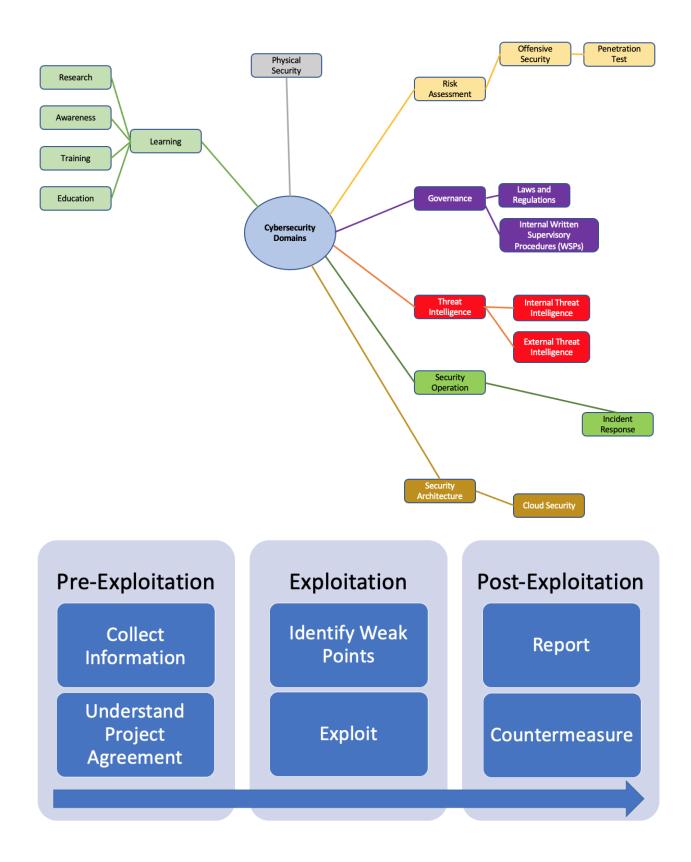
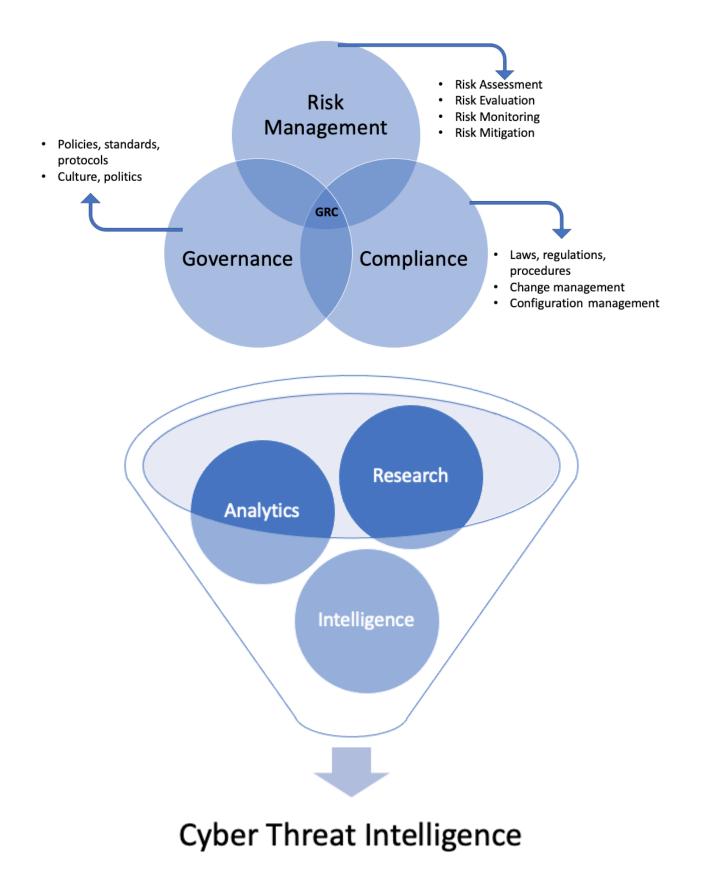
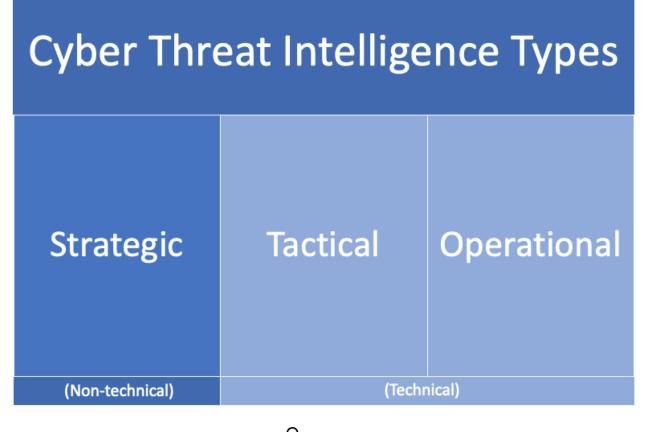


# Chapter 2: Which Career Field Is Best for You?



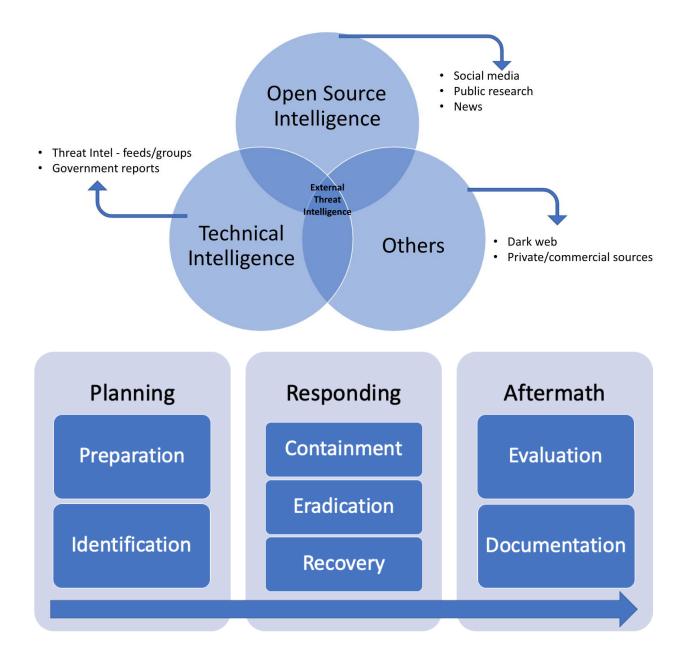


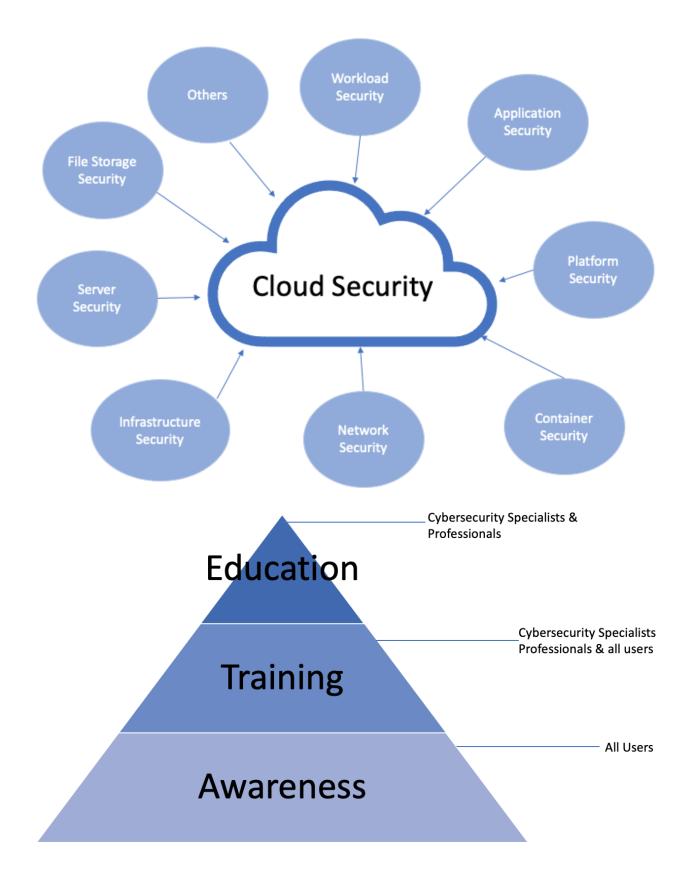


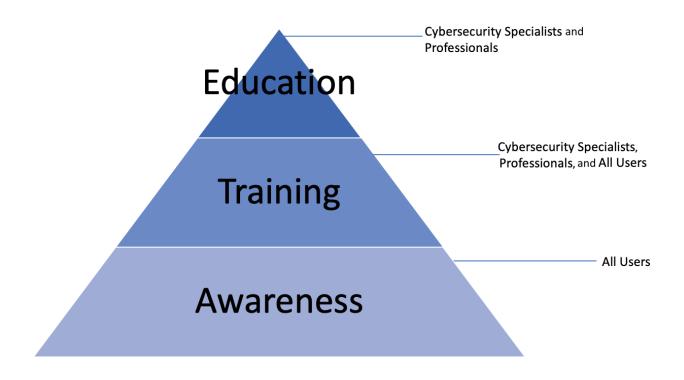


External Threat Intelligence

Cyber Threat Intelligence Operations and Management Internal Threat Intelligence

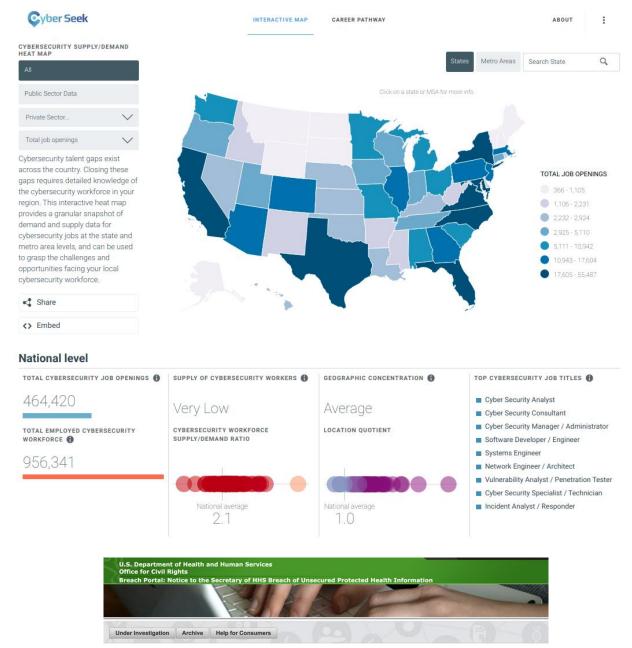








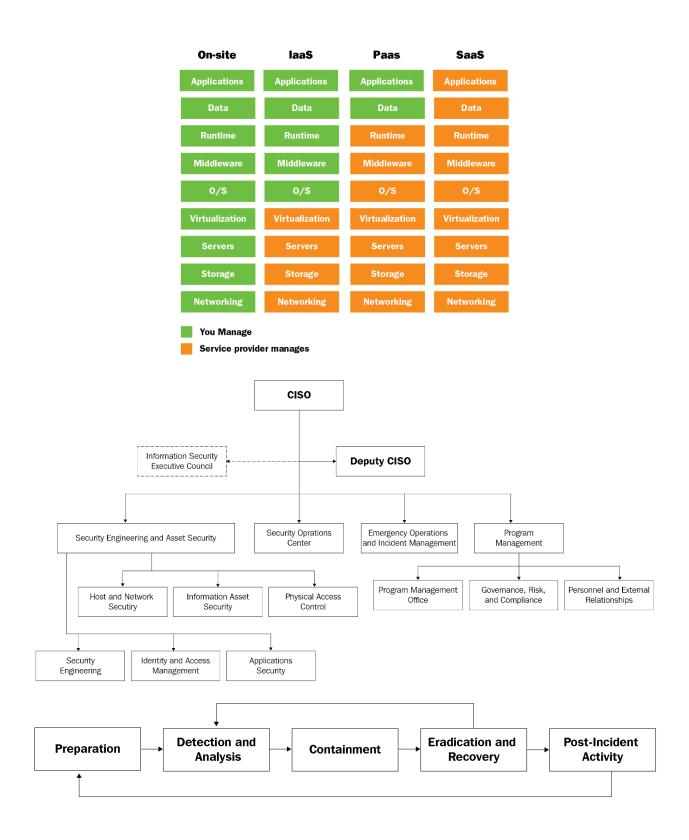
# **Chapter 3: Different Strokes for Different Folks**



### Archive

This page archives all resolved breach reports and/or reports older than 24 months. Show Advanced Options Research Report

			Breach Rep	ort Results			فت شن 🛃 🙌
Expand All	Name of Covered Entity o	State 0	Covered Entity Type ©	Individuals Affected o	Breach Submission Date	Type of Breach	Location of Breached Information
0	Wellness Pharmacy	PA	Healthcare Provider	545	12/10/2020	Theft	Paper/Films
0	26th & Lehigh Pharmacy	PA	Healthcare Provider	549	12/10/2020	Theft	Paper/Films
0	Diamond Pharmacy	PA	Healthcare Provider	616	12/10/2020	Theft	Paper/Films
0	RXN, Inc. d/b/a Lancaster Pharmacy	PA	Healthcare Provider	856	12/10/2020	Theft	Paper/Films
0	Brigham and Women's Hospital	MA	Healthcare Provider	882	12/08/2020	Unauthorized Access/Disclosure	Email
0	Hillcrest Nursing Center	IL	Healthcare	1030	11/24/2020	Unauthorized	Electronic Medical Record



# **Chapter 4: Exploring Certifications and College**

Сс	ompTIA Security +
•	Cost o \$349 (Voucher) o \$100-\$200 (Materials, Videos, Test Book) 1-3 months of consistent study
•	Exam
•	<ul> <li>90 minutes</li> <li>90 questions (Maximum)</li> <li>750 (on a scale of 100-900)</li> <li>Passing Without Industry Experience</li> <li>Less challenging proper studying</li> </ul>
•	<ul> <li>1-3 months of consistent study</li> <li>Exam <ul> <li>90 minutes</li> <li>90 questions (Maximum)</li> <li>750 (on a scale of 100-900)</li> </ul> </li> <li>Passing Without Industry Experience</li> </ul>

# Average Total Cost Per Month: \$160 / 3 Months

## PACKAGES

PEN-200 course + 30 days lab access + OSCP exam certification fee	\$999
PEN-200 course + 60 days lab access + OSCP exam certification fee	\$1199
PEN-200 course + 90 days lab access + OSCP exam certification fee	\$1349
PEN-200 course + 365 days lab access + 2 OSCP exam attempts	\$2148
RETAKES	
OSCP Certification Exam Retake Fee	\$150
LAB EXTENSIONS	
PEN-200 lab access – extension of 30 days	\$359
PEN-200 lab access – extension of 60 days	\$599
PEN-200 lab access – extension of 90 days	\$799

Process of Auditing Information 21%

Governance and Management of 16% Information Technology

Information Systems Acquisition, Development and 18% Implementation

Information Systems Operations, Maintenance and Service 20% Management

Protection of Information Assets 25%

# **Chapter 5: Getting Hands-On Experience with No Experience**

•••		Raspberry Pi Imager v1.5		
		Operating System	x	
	5	Raspberry Pi OS (32-bit) A port of Debian with the Raspberry Pi Desktop (Recommended) Released: 2021-01-11 Online - 1.1 GB download		
	œ	Raspberry Pi OS (other) Other Raspberry Pi OS based images	>	
	<u></u>	Other general purpose OS Other general purpose Operating Systems	>	
	$\bigcirc$	Media player - Kodi OS Kodi based Media player operating systems	>	
	¢.	Emulation and game OS	>	

🤴 Raspb	erry Pi Imager v1.6	—		×
	Advanced options		x	
	Image customization options for this session only	•		
	<ul> <li>Disable overscan</li> <li>Set hostname: pihole .local</li> </ul>			
	Enable SSH			
	Use password authentication Set password for 'pi' user:			
	SAVE			
	← → ♂ ⓓ ① 127.0.0.1:8080/WebGoat/login			

WEBGOAT	
	Username
	Username
	Password
	Password
	Sign in
	Register new user

# WEBGOAT

\$

### HTTP Basics



### Reset lesson

8707-670

### 023≎

### Concept

This lesson presents the basics for understanding the transfer of data between the browser and the web application and how to trap a request/response with a HTTP proxy.

### Goals

The user should become familiar with the features of WebGoat by manipulating the above buttons to view hints, show the HTTP request parameters, the HTTP request cookies, and the Java source code. You may also try using OWASP Zed Attack Proxy for the first time.

### How HTTP works:

All HTTP transactions follow the same general format. Each client request and server response has three parts: the request or response line, a header section and the entity body.

The client initiates a transaction as follows:

- The client contacts the server and sends a document request. A GET request can have url
  parameters and those parameters will be available in the web access logs.
- Next, the client sends optional header information to inform the server of its configuration and the document formats it will accept.
  - User-Agent: Mozilla/4.06 Accept: image/gif,image/jpeg, /
- In a POST request, the user supplied data will follow the optional headers and is not part of the contained within the POST URL.

# WEBGOAT

(A2) Broken Authentication

(A3) Sensitive Data Exposure

(A5) Broken Access Control

(A7) Cross-Site Scripting (XSS)

(A8) Insecure Deserialization

(A9) Vulnerable Components

(A8:2013) Request Forgeries

Client side Challenges

(A4) XML External Entities (XXE)

Introduction

General (A1) Injection SQL Injection (intro) SQL Injection (intro)

GET /index.html?param=value HTTP/1.0



Reset lesson

### $\circ 1284557890128 \circ$

### What is SQL injection?

SQL injections are the most common web hacking techniques. A SQL injection attack consists of insertion or "injection" of malicious code via the SQL query input from the client to the application. If not dealt with correctly, such an injection of code into the application can have an serious impact on e.g. data integrity and security.

SQL injections can occur, when unfiltered data from the client, e.g. the input of a search field, gets into the SQL interpreter of the application itself. If the input from the client does not get checked for containing SQL commands, hackers can easily manipulate the underlying SQL statement to their advantace.

Per example if the input is not filtered for SQL metacharacters like -- (comments out the rest of the line) or ; (ends a SQL query and that way can be used to chain them).

### Example of SQL injection

Think of a web application, that allows to display user information, by typing a username into an input field.

The input will then be sent to the server and gets inserted into a SQL query which then is processed by an SQL interpreter.

The SQL query to retrieve the user information from the database looks like that:

"SELECT \* FROM users WHERE name = '" + userName + "'";

The variable **userName** holds the input from the client and "injects" it into the query. If the input would be Smith the query then looks like that

"SELECT \* FROM users WHERE name = 'Smith'";

# Introduction Edeneral ITTP Basics HTTP Proxies Developer Tools CA had Crypto Basics (A had Crypto Basics (A had) (A ha

WEBGOAT		SQL Injection (intro)	å · h i E
Introduction General (A1) Injection	> >	Show hints Reset lesson	
SQL Injection (intro) SQL Injection (advanced) SQL Injection (mittigation) Path traversal			
<ul> <li>(A2) Broken Authentication</li> <li>(A3) Sensitive Data Exposure</li> <li>(A4) XML External Entities (XXE)</li> <li>(A5) Broken Access Control</li> </ul>	> >	Compromising Integrity with QL After compromising the confidentiality of data in the previous lesson, compromise the integrity of data by using SQL query chaining. The integrity of any data can be compromised, if an attacker per examined integrity of any data can be compromised, if an attacker per examined in the previous section of the section of t	this time we are gonna
(A7) Cross-Site Scripting (XSS) (A8) Insecure Deserialization (A9) Vulnerable Components	>	should not even be able to access. What is SQL query chaining? Query chaining is exactly what it sounds like. When query chaining, y	ou try to append one or more
(A8:2013) Request Forgeries Client side Challenges	>	queries to the end of the actual query. You can do this by using the ; r end of a query and that way allows to start another one right after it w It is your turn!	
		You just found out that Tobi and Bob both seem to earn more money leave it at that. Better go and <i>change your own salary so you are earning the most!</i> Remember: Your name is John <b>Smith</b> and your current TAN is <b>3SL99</b> .	oopena That a maan dhonna (kuu Tholanna dacaadaa)
		Employee Name:         Lastname           Authentication TAN:         TAN           Get department	
		MALWARE-TRAFFIC-ANAL	SIS.NET
	Traffic a	RCISES Inalysis exercise - AscoLimited Inalysis exercise - WokeMountain	<u>~</u>

- 2020-12-31 -- Traffic analysis quiz Pcaps for an ISC diary
   2020-12-03 -- Traffic analysis quiz Pcap and alerts for an ISC diary
   2020-11-13 -- Traffic analysis exercise Quiethub
   2020-11-10 -- Traffic analysis quiz Pcap and alerts for an ISC diary

- 2020-11-10 -- Traffic analysis quiz Pcap and alerts for an ISC diary
  2020-10-22 -- Traffic analysis exercise Omegacast
  2020-09-25 -- Traffic analysis exercise Trouble Alert
  2020-09-14 -- Traffic analysis quiz Pcap and alerts for an ISC diary
  2020-08-24 -- Traffic analysis exercise Pizza-Bender
  2020-08-04 -- Traffic analysis exercise Pizza-Bender
  2020-08-04 -- Traffic analysis exercise Tecsolutions
  2020-08-12 -- Traffic analysis exercise Tecsolutions
  2020-06-28 -- Traffic analysis exercise Tecsolutions
  2020-06-28 -- Traffic analysis exercise Frank-n-Ted (What's going on?)
  2020-05-28 -- Traffic analysis exercise SteelCoffee
  2020-03-14 -- Traffic analysis exercise Mondogreek
  2020-03-21 -- Traffic analysis exercise Mondogreek

- 2020-02-21 -- Traffic analysis exercise All aboard the hot mess express!
   2020-01-30 -- Traffic analysis exercise Sol-Lightnet
- · 2019-12-25 -- Traffic analysis exercise It happened on Christmas day

- 2019-12-25 -- Traffic analysis exercise in happened of C 2019-12-03 -- Traffic analysis exercise locational 2019-10-05 -- Traffic analysis exercise <mark>Okay-boomer</mark> 2019-06-20 -- Traffic analysis exercise Baßundt 2019-07-19 -- Traffic analysis exercise So hot right now
- 2019-06-22 Traffic analysis exercise Phenomenoc 2019-05-02 Traffic analysis exercise BeguileSoft 2019-04-15 Traffic analysis exercise StingrayAhoy
- 2019-03-19 Traffic analysis exercise StingrayAnd
   2019-03-19 Traffic analysis exercise LittleTigers
   2019-02-23 Traffic analysis exercise Stormtheory
- 2019-01-28 -- Traffic analysis exercise Timbershade
- 2018-12-26 Two pcaps I provided for UA-CTF in November 2018
   2018-12-18 Traffic analysis exercise Eggnog soup
   2018-11-13 Traffic analysis exercise Turkey and defence
   2018-11-01 Two pcaps I provided for UISGCON CTF in 2018
   2018-031 Traffic analysis exercise Happy Halloween!
   2018-09-27 Traffic analysis exercise Blank Clipboard

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157 19	.327796	10.11.11.11			10.11.11.200		157 TCF	P	88 → 49160 [RST, AC
158 19	.345827	10.11.11.200		158	10.11.11.11		158 TCF	P	49161 → 88 [ACK] Se
159 19		10.11.11.200			10.11.11.11		159 TCF		49161 → 88 [ACK] Se
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161 19		10.11.11.11			10.11.11.200		161 TCF		88 → 49161 [ACK] Se
162 19		10.11.11.11			10.11.11.200		162 TCF		88 → 49161 [ACK] Se
163 19		10.11.11.11			10.11.11.200		163 KRE		
164 19		10.11.11.200			10.11.11.11		164 TCF		49161 → 88 [ACK] Se
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169         19           170         19           171         19           172         19           172         19           172         19           172         19           172         19           172         19           172         19           172         19           172         19           me 105: 68 th         thernst 11, Sr           sequence Num         Sequence Num           Sequence Num         Sequence Num           1000         Kachnovledgme           Acknovledgme         Sequence Num           1000         192           1010         192           1020         193           1020         193           1030         192           1040         192           1050         193           1020         193           1020         193           1020         193           1020         193           1020         193           1020         193           1020         193           1020         193	351383 352643 352643 364131 oytes on Vr c: Dell 49156 Port: 135 x: 0] Len: 0] ber (raw) ice Number nt Number nt Number nt Number (raw) ice Number (raw) window si 9313 [unv	<pre>le.11.11.11 le.11.11.11 le.11.11.11 le.11.11.200 vire (544 bits), da:56:a9 (64:87:6 a, 55:a9 (64:87:6 a, 57: 10.11 tocol, 57: Port: (relative seque : 000156333 : 1 (relative : 0 (relative seque : 0 (relative seque : 0 (relative seque : 2 (re</pre>	59:8a:50:a9), 11.200, Dst: : 49156, Dst nce number) sequence num 8)	169 170 171 172 vtured Dst: 10.11 Port: mmber)]	10.11.11.11 10.11.11.200 10.11.11.200 10.11.11.200 10.11.11.11 (544 bits) Dell_80:a3:66 (t 11.11 135, Seq: 0, Let		169 LD/ 170 TCF 171 LD/ 172 LD/	AP P AP	bindRequest(3) " <r0 389 → 49158 [ACK] S bindResponse(3) suc</r0 
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### NOV 2019 TRAFFIC ANALYSIS EXERCISE ANSWERS

Link to exercise: https://www.malware-traffic-analysis.net/2019/11/12/index.html

2019-11-12-traffic-analysis-exercise-answers.pdf

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Links to some tutorials I've written that should help with this exercise:

- Customizing Wireshark Changing Your Column Display
  Using Wireshark: Identifying Hosts and Users
  Using Wireshark. Display Filter Expressions
  Using Wireshark: Exporting Objects from a Pcap

### **ENVIRONMENT FOR THE PCAP:**

- LAN segment range: 10.11.11.0/24 (10.11.11.0 through 10.11.11.255)

- Domain: okay-boomer.info
   Domain: okay-boomer.info
   Domain: controller: 10.11.11.11 Okay-Boomer-DC
   LAN segment gateway: 10.11.11.1
   LAN segment broadcast address: 10.11.11.255

### QUESTIONS:

© 0

- What operating system and type of device is on 10.11.11.94?
- What operating system and type of device is on 10.11.11.121?
  Based on the MAC address for 10.11.11.145, who is the manufacturer or
- vendor?
- What operating system and type of device is on 10.11.11.179?
- What version of Windows is being used on the host at 10.11.11.195?
  What is the user account name used to log into the Windows host at
- 10.11.11.200?
- What operating system and type of device is on 10.11.11.217?
- What IP is a Windows host that downloaded a Windows executable file over HTTP?
- . What is the URL that returned the Windows executable file?
- · What is the SHA256 file hash for that Windows executable file?
- What is the detection rate for that SHA256 hash on VirusTotal?

- What public IP addresses did that Windows host attempt to connect over TCP after the executable file was downloaded?
  What is the host name and Windows user account name used on that IP address?

Page 1 of 16

						_	201	9-11-12-traffic-a	analysis-	exercise	e.pcap									
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	49.391855	10.11					-	10.11.11.94					DNS				Standard			
	49.841700		.11.94					10.11.11.11				886					Standard			
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				. 75 t	bvtes	_			_			896	DNS		_	-	Standard	query	0x8ea	
<ul> <li>Frame 880: 7!</li> <li>Ethernet II,</li> </ul>	5 bytes on w	vire (60	0 bits)			capture	d (	600 bits)	8:66 (0	0:14:2						_	Standard	query	0x8ea	
▶ Frame 880: 75	5 bytes on w Src: HonHai	/ire (60	0 bits) 1:9d (3	8:b1:0	db:d0:	capture 91:9d),	d ( Ds	600 bits) t: Dell_80:a3	3:66 (0	0:14:2					_		Standard	query	0x8ea	
<ul> <li>▶ Frame 880: 75</li> <li>▶ Ethernet II,</li> </ul>	5 bytes on w Src: HonHai tocol Versio	vire (60 .Pr_d0:9 on 4, Sr	0 bits) 1:9d (3 c: 10.1	8:b1:0 1.11.9	db:d0: 94, Ds	capture 91:9d), st: 10.1	d ( Ds	600 bits) t: Dell_80:a3	3:66 (0	0:14:2							Standard	query	0x8ea	
<ul> <li>Frame 880: 7</li> <li>Ethernet II,</li> <li>Internet Prof</li> </ul>	5 bytes on w Src: HonHai tocol Versio m Protocol,	vire (60 Pr_d0:9 on 4, Sr Src Por	0 bits) 1:9d (3 c: 10.1	8:b1:0 1.11.9	db:d0: 94, Ds	capture 91:9d), st: 10.1	d ( Ds	600 bits) t: Dell_80:a3	3:66 (0	0:14:2							Standard	query	0x8ea	
<ul> <li>Frame 880: 7</li> <li>Ethernet II,</li> <li>Internet Prof</li> <li>User Datagram</li> </ul>	5 bytes on w Src: HonHai tocol Versio m Protocol,	vire (60 Pr_d0:9 on 4, Sr Src Por	0 bits) 1:9d (3 c: 10.1	8:b1:0 1.11.9	db:d0: 94, Ds	capture 91:9d), st: 10.1	d ( Ds	600 bits) t: Dell_80:a3	3:66 (0	0:14:2							Standard	query	0x8ea	
<ul> <li>Frame 880: 7</li> <li>Ethernet II,</li> <li>Internet Prof</li> <li>User Datagram</li> </ul>	5 bytes on w Src: HonHai tocol Versio m Protocol,	vire (60 Pr_d0:9 on 4, Sr Src Por	0 bits) 1:9d (3 c: 10.1	8:b1:0 1.11.9	db:d0: 94, Ds	capture 91:9d), st: 10.1	d ( Ds	600 bits) t: Dell_80:a3	3:66 (0	0:14:2							Standard	query	0x8ea	
<ul> <li>Frame 880: 7!</li> <li>Ethernet II,</li> <li>Internet Prot</li> <li>User Datagram</li> <li>Domain Name 9</li> </ul>	5 bytes on w Src: HonHai tocol Versio m Protocol, System (quer 80 a3 66 38	vire (60 Pr_d0:9 on 4, Sr Src Por Src Por Sy)	0 bits) 1:9d (3 c: 10.1 t: 5623 d0 91 9	8:b1:0 1.11.9 9, Dst	db:d0: 94, Ds t Port 00 45	capture 91:9d), t: 10.1 :: 53	d ( Ds 1.1	600 bits) t: Dell_80:ai 1.11		0:14:2							Standard	query	0x8ea	
<ul> <li>Frame 880: 73</li> <li>Ethernet II,</li> <li>Internet Proi-</li> <li>User Datagram</li> <li>Domain Name 3</li> <li>00000 00 14 22</li> <li>0010 00 34 75</li> </ul>	5 bytes on w Src: HonHai tocol Versio m Protocol, System (quer 80 a3 66 38 af 40 00 40	vire (60 Pr_d0:9 on 4, Sr Src Por y) b1 db 11 9a	0 bits) 1:9d (3 c: 10.1 t: 5623 d0 91 9 82 0a 0	8:b1:0 1.11.9 9, Ds1 9d 08 0b 0b	db:d0: 94, Ds t Port 00 45 5e 0a	capture 91:9d), st: 10.1 :: 53	:d ( Ds .1.1	600 bits) t: Dell_80:ai 1.11 .f8E		0:14:2							Standard	query	0x8ea	
<ul> <li>Frame 880: 75</li> <li>Ethernet II,</li> <li>Internet Prot</li> <li>User Datagara</li> <li>Domain Name 5</li> <li>0000 00 14 22</li> <li>0010 00 3d 75</li> <li>0020 0b db db</li> </ul>	5 bytes on w Src: HonHai tocol Versio m Protocol, System (quer 80 a3 66 38 af 40 00 40 af 00 35 00	vire (60 Pr_d0:9 on 4, Sr Src Por y) b1 db 11 9a 29 8c	0 bits) 1:9d (34 c: 10.1 t: 56239 d0 91 9 82 0a 0 65 36 0	8:b1:0 1.11.9 9, Ds1 9, 0s1 90 08 90 01	db:d0: 94, Ds t Port 00 45 5e 0a 00 00	capture 91:9d), st: 10.1 :: 53 00 0b 01	ed () Ds: .1.1	600 bits) t: Dell_80:a: 1.11 .f8E		0:14:2							Standard	query	0x8ea	
<ul> <li>Frame 880: 7</li> <li>Ethernet II,</li> <li>Internet Prob</li> <li>User Datagram</li> <li>Domain Name 5</li> <li>0000 00 14 22</li> <li>0010 00 3d 75</li> <li>0020 00 00 00</li> <li>0030 00 00 00</li> </ul>	5 bytes on w Src: HonHai tocol Versio m Protocol, System (quer 80 a3 66 38 af 40 00 40 af 00 35 00 00 00 00 08 38	/ire (60 .Pr_d0:9 on 4, Sr Src Por Src Por y) b1 9 11 9 29 8c 29 8c 77 77	0 bits) 1:9d (34 c: 10.1 t: 56239 d0 91 9 82 0a 6 65 36 6 77 07 6	8:b1:0 1.11.9 9, Ds1 9, 0s1 90 08 90 01	db:d0: 94, Ds t Port 00 45 5e 0a 00 00	capture 91:9d), it: 10.1 :: 53 00 0b 01 74	d ( Ds .1.1 =u (	600 bits) t: Dell_80:ai 1.11 .f8E		0:14:2							Standard	query	0x8ea	
<ul> <li>Frame 880: 7</li> <li>Ethernet II,</li> <li>Internet Prob</li> <li>User Datagram</li> <li>Domain Name 5</li> <li>0000 00 14 22</li> <li>0010 00 3d 75</li> <li>0020 00 00 00</li> <li>0030 00 00 00</li> </ul>	5 bytes on w Src: HonHai tocol Versio m Protocol, System (quer 80 a3 66 38 af 40 00 40 af 00 35 00	/ire (60 .Pr_d0:9 on 4, Sr Src Por Src Por y) b1 9 11 9 29 8c 29 8c 77 77	0 bits) 1:9d (34 c: 10.1 t: 56239 d0 91 9 82 0a 6 65 36 6 77 07 6	8:b1:0 1.11.9 9, Ds1 9, 0s1 90 08 90 01	db:d0: 94, Ds t Port 00 45 5e 0a 00 00	capture 91:9d), it: 10.1 :: 53 00 0b 01 74	d ( Ds .1.1 =u (	600 bits) t: Dell_80:a: 1.11 .f8E. @.@ .5.).e6 .www.gstat		0:14:2							Standard	query	0x8ea	
<ul> <li>Frame 880: 7</li> <li>Ethernet II,</li> <li>Internet Prob</li> <li>User Datagram</li> <li>Domain Name 5</li> <li>0000 00 14 22</li> <li>0010 00 3d 75</li> <li>0020 00 00 00</li> <li>0030 00 00 00</li> </ul>	5 bytes on w Src: HonHai tocol Versio m Protocol, System (quer 80 a3 66 38 af 40 00 40 af 00 35 00 00 00 00 08 38	/ire (60 .Pr_d0:9 on 4, Sr Src Por Src Por y) b1 9 11 9 29 8c 29 8c 77 77	0 bits) 1:9d (34 c: 10.1 t: 56239 d0 91 9 82 0a 6 65 36 6 77 07 6	8:b1:0 1.11.9 9, Ds1 9, 0s1 90 08 90 01	db:d0: 94, Ds t Port 00 45 5e 0a 00 00	capture 91:9d), it: 10.1 :: 53 00 0b 01 74	d ( Ds .1.1 =u (	600 bits) t: Dell_80:a: 1.11 .f8E. @.@ .5.).e6 .www.gstat		0:14:2							Standard	query	0x8ea	
<ul> <li>Frame 880: 7!</li> <li>Ethernet II,</li> <li>Internet Proi</li> <li>User Datagram</li> <li>Domain Name 9</li> <li>0000 00 14 22</li> <li>0010 00 3d 75</li> <li>0020 0b 0b db</li> <li>0030 00 00 00</li> <li>0040 69 63 03</li> </ul>	5 bytes on w Src: HonHai tocol Versio m Protocol, System (quer 80 a3 66 38 af 40 00 40 af 00 35 00 00 00 00 08 38	vire (60) Pr_d0:9 nn 4, Sr Src Por y) bl db 11 9a 29 8c 77 77 00 01	0 bits) 1:9d (34 2: 10.1 1: 5623 1: 56	8:b1:0 1.11.9 9, Ds1 9, 0s1 90 08 90 01	db:d0: 94, Ds t Port 00 45 5e 0a 00 00	capture 91:9d), it: 10.1 :: 53 00 0b 01 74	d ( Ds .1.1 =u (	600 bits) t: Dell_80:a: 1.11 .f8E. @.@ .5.).e6 .www.gstat		0:14:2			)		splayed: 7				Øx8ea	

	Source	Src Port	Destination	Dest Port	Protocol	Ct Info
1192 63.989458	10.11.11.94	1192	216.58.194.35	1192	HTTP	GET /generate_204 HTTP/1.1
1194 64.008388	216.58.194.35	1194	10.11.11.94	1194	HTTP	HTTP/1.1 204 No Content
1203 64.383828	10.11.11.94	1203	216.58.194.35	1203	HTTP	GET /generate_204 HTTP/1.1
1205 64.406435	216.58.194.35	1205	10.11.11.94	1205	HTTP	HTTP/1.1 204 No Content
1253 66.465375	10.11.11.94	1253	216.58.194.35	1253	HTTP	GET /generate_204 HTTP/1.1
1258 66.489534	216.58.194.35	1258	10.11.11.94	1258	HTTP	HTTP/1.1 204 No Content
2362 91.205093	10.11.11.94	2362	64.98.145.30	2362	HTTP	GET / HTTP/1.1
2381 91.374999	64.98.145.30	2381	10.11.11.94	2381	HTTP	HTTP/1.1 303 See Other (text/ht
2385 91.703514	10.11.11.94	2385	216.58.194.35	2385	HTTP	GET /generate_204 HTTP/1.1
2389 91.734005	216.58.194.35	2389	10.11.11.94	2389	HTTP	HTTP/1.1 204 No Content
2602 94.765429	10.11.11.94	2602	52.218.228.130	2602	HTTP	GET /core/scripts/lrs/tin-can.mi
3065 95.220143	52.218.228.130	3065	10.11.11.94	3065	HTTP	HTTP/1.1 200 OK (application/ja
3078 95.246355	10.11.11.94	3078	52.218.228.130	3078	HTTP	GET /templates/black-friday/blac
3093 95.347073	52.218.228.130	3093	10.11.11.94	3093	HTTP	HTTP/1.1 200 OK (application/ja
3096 95.356485	10.11.11.94	3096	52.218.228.130	3096	HTTP	GET /templates/black-friday/snow
3114 95.478909	52.218.228.130	3114	10.11.11.94	3114	HTTP	HTTP/1.1 200 OK (application/ja
4734 120.74357	5 10.11.11.94	4734	216.58.194.35	4734	HTTP	GET /generate_204 HTTP/1.1
4735 120.77411	7 216.58.194.35	4735	10.11.11.94	4735	HTTP	HTTP/1.1 204 No Content
8469 148.71496	8 10.11.11.94	8469	216.58.194.35	8469	HTTP	GET /generate_204 HTTP/1.1
8471 148.73355	0 216.58.194.35	8471	10.11.11.94	8471	HTTP	HTTP/1.1 204 No Content
3313 193.04442	1 10.11.11.94	13313	216.58.194.35	13313	HTTP	GET /generate 204 HTTP/1.1
	1194         64.008388           1203         64.408328           1205         64.406335           1225         66.4085345           1253         66.4085345           1253         66.4085345           1253         66.4085345           1253         66.4085345           1253         66.4085345           1253         61.4085345           1253         61.4085345           1253         61.4085345           1263         91.7085414           1200         94.75429           1260         94.765429           2602         94.765429           3076         95.2404355           30870         95.347073           30876         95.356485           120.734711         120.74357           4733         120.74357           4745         120.74357           4469         148.71496           44571         148.73355	1194         64.008388         216.58.194.35           1203         64.383928         10.11.11.94           1205         64.406435         216.58.194.35           1205         64.406435         216.58.194.35           1253         66.465375         10.11.11.94           1258         66.49535         10.11.11.94           1258         66.495354         216.58.194.35           2262         91.205993         10.11.11.94           2381         91.374999         64.98.145.30           2385         91.73514         10.11.11.94           2389         91.734065         216.58.194.35           2602         94.765429         10.11.11.94           3065         95.246355         10.11.11.94           3096         95.347073         52.218.228.130           3097         95.246355         10.11.11.94           3114         95.478909         52.218.228.130           3114         95.478957         10.11.11.94           3124         120.73575         10.11.11.94           3149         92.073575         10.11.11.94           3149         92.073550         10.11.11.94           31469.148.733550         10.11.11.94 <tr< td=""><td>1194         64.008388         216.58.194.35         1194           1203         64.008388         10.11.11.94         1203           1205         64.406435         216.58.194.35         1205           1205         64.406435         216.58.194.35         1205           1205         64.406435         216.58.194.35         1253           1253         66.405375         10.11.11.94         1253           1253         66.405375         10.11.11.94         2362           22361         91.374999         64.98.145.30         2381           2385         91.734065         216.58.194.35         2389           2602         94.765429         10.11.11.94         2365           2602         94.765429         10.11.11.94         2602           3076         95.246355         10.11.11.94         3063           3093         95.347073         52.218.228.130         3093           30945         95.356485         10.11.11.94         3064           3114         95.478995         52.218.228.130         3114           4734         120.743575         10.11.11.94         4734           4735         10.11.11.94         4734           473<td></td><td>1194         64.008388         216.58.194.35         1194         10.11.11.94         1194           1203         64.008388         216.58.194.35         1194         10.11.11.94         1203           1205         64.406435         216.58.194.35         1205         10.11.11.94         1203           2125         66.466435         216.58.194.35         1205         11.11.94         1203           2125         66.466435         216.58.194.35         1253         126.58.194.35         1253           226         91.29503         10.11.11.94         2362         64.99.145.30         2362           22361         91.374999         64.98.145.30         2381         10.11.11.94         2382           2389         91.734065         216.58.194.35         2389         10.31.11.94         2389           2602         94.765429         10.11.11.94         2062         52.218.228.130         2062           2678         95.246355         10.11.11.94         3078         52.218.228.130         3093         10.11.11.94         3093           3096         95.356485         10.11.11.94         3096         52.218.228.130         3093         301.11.11.94         3093           3097         95.3764</td><td>1194       64.008388       216.58.194.35       1194       10.11.11.94       1194       HTTP         1203       64.008388       10.11.11.94       1203       216.58.194.35       1203       HTTP         1205       64.406435       216.58.194.35       1205       HTTP       1205       64.406435       216.58.194.35       1205       HTTP         1253       66.466455       216.58.194.35       1253       216.58.194.35       1253       HTTP         1253       66.469537       10.11.11.94       1253       216.58.194.35       1258       HTTP         1258       66.495031       10.11.11.94       2362       64.98.145.30       2362       HTTP         2361       91.705514       10.11.11.94       2385       216.58.194.35       2389       HTTP         2602       94.765429       10.11.11.94       2385       216.58.194.35       2389       HTTP         2602       94.765429       10.11.11.94       2602       52.218.228.130       2602       HTTP         2602       94.765429       10.11.11.94       2602       52.218.228.130       3093       10.11.11.94       3665         3078       95.246355       10.11.11.94       3065       10.11.11.94       <td< td=""></td<></td></td></tr<>	1194         64.008388         216.58.194.35         1194           1203         64.008388         10.11.11.94         1203           1205         64.406435         216.58.194.35         1205           1205         64.406435         216.58.194.35         1205           1205         64.406435         216.58.194.35         1253           1253         66.405375         10.11.11.94         1253           1253         66.405375         10.11.11.94         2362           22361         91.374999         64.98.145.30         2381           2385         91.734065         216.58.194.35         2389           2602         94.765429         10.11.11.94         2365           2602         94.765429         10.11.11.94         2602           3076         95.246355         10.11.11.94         3063           3093         95.347073         52.218.228.130         3093           30945         95.356485         10.11.11.94         3064           3114         95.478995         52.218.228.130         3114           4734         120.743575         10.11.11.94         4734           4735         10.11.11.94         4734           473 <td></td> <td>1194         64.008388         216.58.194.35         1194         10.11.11.94         1194           1203         64.008388         216.58.194.35         1194         10.11.11.94         1203           1205         64.406435         216.58.194.35         1205         10.11.11.94         1203           2125         66.466435         216.58.194.35         1205         11.11.94         1203           2125         66.466435         216.58.194.35         1253         126.58.194.35         1253           226         91.29503         10.11.11.94         2362         64.99.145.30         2362           22361         91.374999         64.98.145.30         2381         10.11.11.94         2382           2389         91.734065         216.58.194.35         2389         10.31.11.94         2389           2602         94.765429         10.11.11.94         2062         52.218.228.130         2062           2678         95.246355         10.11.11.94         3078         52.218.228.130         3093         10.11.11.94         3093           3096         95.356485         10.11.11.94         3096         52.218.228.130         3093         301.11.11.94         3093           3097         95.3764</td> <td>1194       64.008388       216.58.194.35       1194       10.11.11.94       1194       HTTP         1203       64.008388       10.11.11.94       1203       216.58.194.35       1203       HTTP         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> Likericet Protocol Version 4, Src: 10.11.1.94, Dst: 216.58.19510 (Usto:ISIS) Address > Internet Protocol Version 4, Src: 10.11.1.94, Dst: 216.58.19510 (Usto:ISIS) Address > Transmission Control Protocol > GET /generate\_204 HTTP/1.1r\n Host: www.gstatic.com/\n Connection: keep-alive\r\n Pragma: no-cache\r\n Cache-Control: no-cache\r\n Cache-Control: no-cache\r\n User-Agent: Mozilla/5.0 [X11; Cr05 x86\_64 12239.92.1] AppleWebKit/537.36 (KHTML, like Gecko) Chrome/76.0.3809.136 Safari/537.36\r\n Accept-Encoding: gzip, deftate\r\n \r\n [Full request URI: http://www.gstatic.com/generate\_204] [HTTP request 1/6] [Response in frame: 1205] [Next request in frame: 1253]

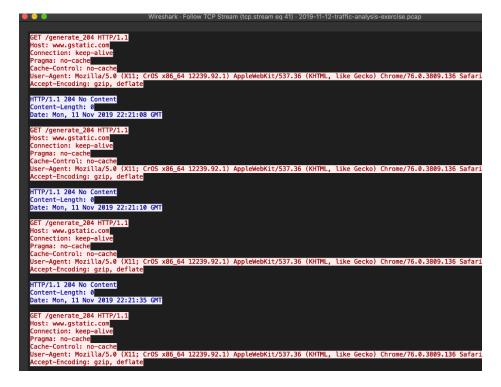
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	Time	Source	Src Port	Endpoints		t Port	Protocol	Ct Info
1192	63.989458	10.11.11.94	TOIOTOIL	Packet Lengths			HTTP	GET /gen
1194	64.008388	216.58.194.35		I/O Graphs		1194	HTTP	HTTP/1.1
1203	64.383828	10.11.11.94		Service Response Time	•	1203	HTTP	GET /gen
1205	64.406435	216.58.194.35				1205	HTTP	HTTP/1.1
1253	66.465375	10.11.11.94		DHCP (BOOTP) Statistics		1253	HTTP	GET /gen
1258	66.489534	216.58.194.35		ONC-RPC Programs		1258	HTTP	HTTP/1.1
2362	91.205093	10.11.11.94		29West		2362	HTTP	GET / HT
2381	91.374999	64.98.145.30		ANCP		2381	HTTP	HTTP/1.1
2385	91.703514	10.11.11.94		BACnet		2385	HTTP	GET /gen
2389	91.734005	216.58.194.35		Collectd		2389	HTTP	HTTP/1.1
2602	94.765429	10.11.11.94		DNS		2602	HTTP	GET /cor
3065	95.220143	52.218.228.130		Flow Graph		3065	HTTP	HTTP/1.1
3078	95.246355	10.11.11.94		HART-IP		3078	HTTP	GET /tem
3093	95.347073	52.218.228.130		HPFEEDS		3093	HTTP	HTTP/1.1
3096	95.356485	10.11.11.94		HTTP		3096	HTTP	GET /tem
3114	95.478909	52.218.228.130		HTTP2		3114	HTTP	HTTP/1.1
4734	120.743575	10.11.11.94		Sametime		4734	HTTP	GET /gen

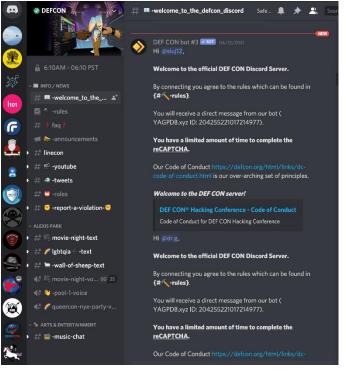
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		Ethernet · 1	6	IPv4 · 364	IPv6	TCP · 598 L	IDP · 1146
Address	∧   Packets	Bytes	Tx F	Packets   T>	Bytes	Rx Packets	Rx Bytes
3.211.86.101	35	8761		17	6326	18	2435 —
5.188.108.58	36	2328		0	0	36	2328 —
8.8.8	68	6800		30	3942	38	2858 —
10.11.11.11	4,139	700k		1,712	274k	2,427	426k —
10.11.11.94			_			394	302k –
10.11.11.121	Apply as F			Selected		237	86k —
10.11.11.145	Prepare as	s Filter		Not Select	ted	19	1864 —
10.11.11.179	Find			and Sele	ected	2,864	2894k —
10.11.11.195	Colorize			or Selec	ted	848	636k —
10.11.11.200	7,536	3911k		and not	Selected	3,624	3511k —
10.11.11.203	1,379	613k		or not Se	elected	641	488k —
10.11.11.217	4,037	1954k				1,943	1715k —
10.11.11.255	181	17k		0	0	181	17k —
12.133.50.21	417	219k		225	199k	192	19k —
12.133.50.22	288	170k		155	157k	133	12k —
13.33.252.19	85	48k		42	44k	43	3382 —
13.33.255.25	728	520k		389	485k	339	34k —

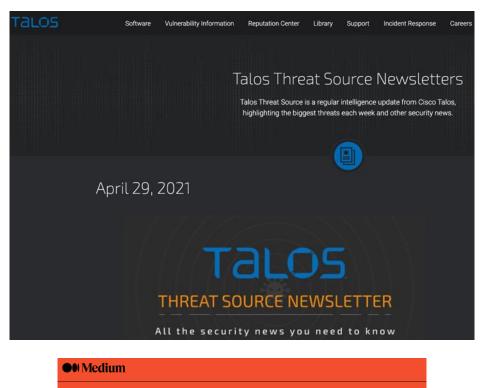
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1165 62.9540 1166 63.1555 1188 63.8539 1189 63.9661 1190 63.9874	28 10.11 46 10.11 <mark>43 10.11</mark>	.11.94 .11.94 .11.94 .11.94 .11.94 3.194.35			OOTP) Statis C Programs	tics ►	

	۷	Viresh	ark · P	rotocol Hierarchy S	Statistics · 20	19-11-12-traffic-ana	lysis-exer
Protocol				Percent Packets	Packets	Percent Bytes	Bytes
<ul> <li>Frame</li> </ul>				100.0	758	100.0	3505
<ul> <li>Ethernet</li> </ul>		100.0	758	3.0	1061		
<ul> <li>Internet Protocol Version</li> </ul>	on 4			100.0	758	4.3	1516
User Datagram Prot	ocol			25.9	196	0.4	1568
Simple Service Discovery Protocol				1.1	8	0.4	1408
NetBIOS Name S		0.3	2	0.0	100		
Multicast Domain Name System				3.3	25	0.4	1419
GQUIC (Google Quick UDP Internet Connection				5.8	44	6.0	2113
Domain Name System				15.4	117	2.1	7213
Transmission Control	ol Protocol			73.9	560	83.2	2914
Transport Layer	Security			18.9	143	36.2	1269
<ul> <li>Hypertext Tran</li> </ul>		_			22	46.5	1629
Media Type	Apply as Filter		Sel	ected	3	44.8	1569
Line-based	Prepare as Filter		Not	Selected	1	0.0	97
Internet Group Ma	Find		ai	nd Selected 🚽 🚽	2	0.0	32
	Colorize		0	Selected			
	Copy as CSV Copy as YAML			nd not Selected not Selected			

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	(ip.addr=	==10.11	.11.94)	&& (ht	tp)														
No			Time			Source			Src P	ort		Desti	nation			Dest	Port		Protoc
		1192	63.9	89458		10.11	11.94				1192	216.	58.19	94.35				1192	HTTP
		1194	64.0	08388		216.58	3.194.	35			1194	10.1	1.11.	94				1194	HTTP
+►		1203	64.3	83828		10.11	11.94				1203	216.	58.19	94.35				1203	HTTP
+		1205	64.4	06435		216.58	3.194.	35			1205	10.1	1.11.	94				1205	HTTP
+		1253	66.4	65375		10.11	11.94				1253	216.	58.19	94.35				1253	HTTP
		1258	66.4	89534		216.58	3.194.	35			1258	10.1	1.11.	94				1258	HTTP
		2362	91.2	05093		10.11	11.94				2362	64.9	8.145	5.30				2362	HTTP
		2381	91.3	74999		64.98	145.3	0			2381	10.1	1.11.	94				2381	HTTP
		2385	91.7	03514		10.11	11.94				2385	216.	58.19	94.35				2385	HTTP
		2389	91.7	34005		216.58	3.194.	35			2389	10.1	1.11.	94				2389	HTTP
		2602	94.7	65429		10.11	11.94				2602	52.2	18.22	28.130	)			2602	HTTP
		3065	95.2	20143		52.218	3.228.	130			3065	10.1	1.11.	94				3065	HTTP
		3078	95.2	46355		10.11	11.94				3078	52.2	18.22	28.130	)			3078	HTTP
		3093	95.3	847073		52.218	3.228.	130			3093	10.1	1.11.	94				3093	HTTP
		3096	95.3	56485		10.11	11.94				3096	52.2	18.22	28.130	)			3096	HTTP
		3114	95.4	78909		52.218	3.228.	130			3114	10.1	1.11.	94				3114	HTTP







# Where ideas take shape before they take off.

If you have a story to tell, knowledge to share, or a perspective to offer welcome home. It's easy and free to post your thinking on any topic, whether it's a standalone piece, a blog, or a publication with other writers. And with tools that let you express yourself creatively and connect with a growing audience of 170 million readers, you'll have the chance to plant a seed, or even start a movement.

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# **Chapter 6: Time to Brand Yourself – Not the Burning Type**



Jaclyn (Jax) Scott Founder 
Managing Partner 
Podcaster 
Cyber Expert 
Fech Blo...
Imo

This is the second law enforcement intervention to remove malware from compromised machines without users notifications.

The first reporting happened around April 13th. I shared an article about the FBI having a court-approved order to remove web shells from compromised US-based Microsoft Exchange services without first notifying the servers' owners. Article: https://lnkd.in/ehTyUaK

Anyone else concerned about privacy? What cyber law covers this type of intervention?

Josh Jackson this is your lane. Can you shine some light on privacy versus security and the law which supports agencies intervening without organization's approval?

#privacy #cybersecurity #technology https://lnkd.in/ekDZHJq

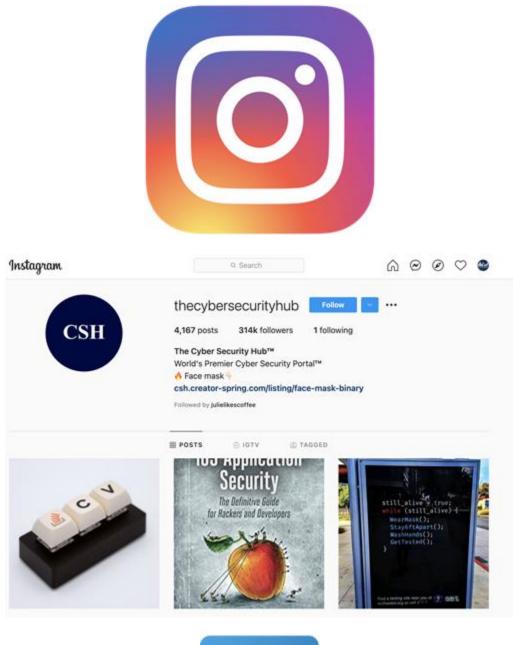


Emotet Malware Destroys Itself From All Infected Computers thehackernews.com · 3 min read













"Hi, Their Name

I love what you are doing at X Company. I am looking to connect with people like you to build a network of like-minded people supporting each other. It would be great to connect with you.

Enjoy your day, Your Name"

ly 🗖 CEO of
1,231,593
N

Sara Blakely 
Sounder and CEO of SPANX
The vector of the second s

Remember the arrow must be pulled back in order to spring forward. Often when life is dragging us down with problems and dark times it's easy to feel defeated. But what if we flipped that thought on its head? When you're going tl ...see more

...

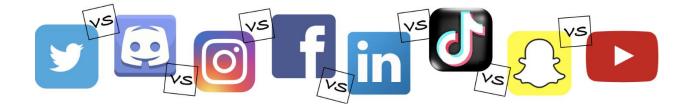


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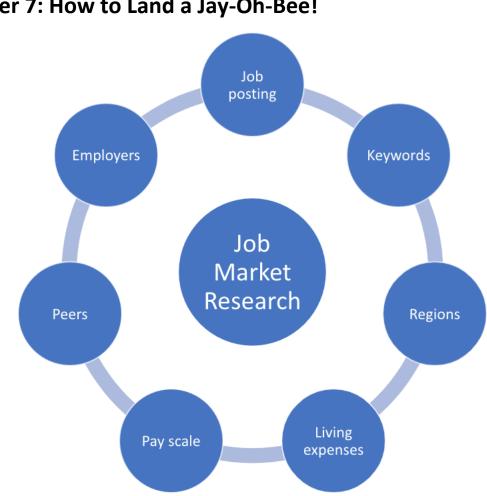
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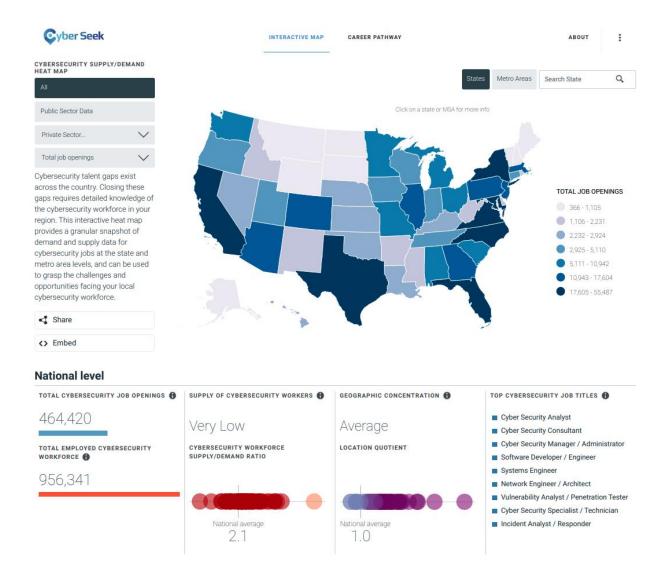
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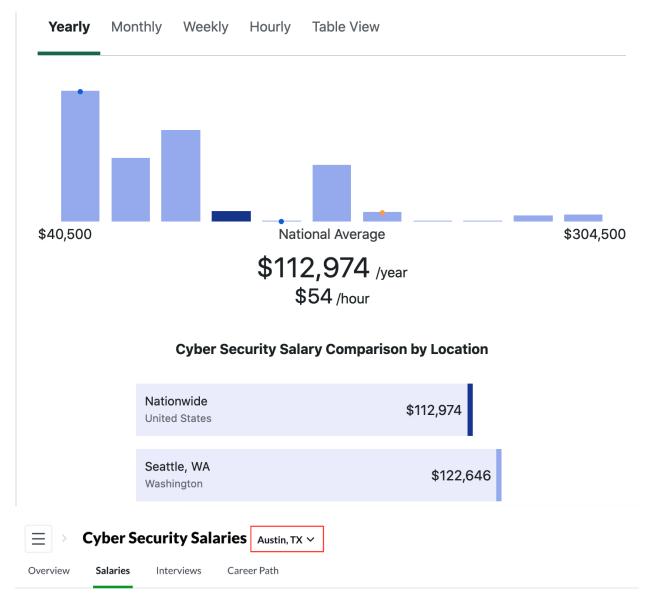
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# Chapter 7: How to Land a Jay-Oh-Bee!



Most relevant •       Any Time •       25 mi (40 km) •       Company •       Salary •       Location •       Job Type •         Experience Level •       Image: Company •       Salary •       Location •       Job Type •         Turn on job alerts       Off         720 Network Security Engineer Jobs in Seattle, Washington, United States (22 new)         Image: Application Security Engineer Protego Trust	
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Seattle, WA	
🕏 Be an early applicant	
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Staff Product Security Engineer	
Flexport	
Bellevue, WA           Be an early applicant	
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Senior Field Solution Architect - Network Security	
CDW	
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Systems Engineer II	
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Bellevue, WA           Be an early applicant	
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Security Operations Engineer Amazon	
Seattle, WA	
🕏 Be an early applicant	
7 days ago	
Security Engineer, Cloud Enterprise Infrastructure Protection Security	
Google Kirkland, WA	
Be an early applicant	
6 days ago	



### How much does a Cyber Security make in Austin, TX?

Industry	Employer Size	Experience
Computer Software & Hardware 🛛 🗸	51 to 200 Employees	✓ 1-3 Years ✓
Very High Confidence	,	
\$102,346 <sub>/yr</sub>	Not enough repor	ts to show salary distribution
Average Base Pay		
45 salaries	Low	High

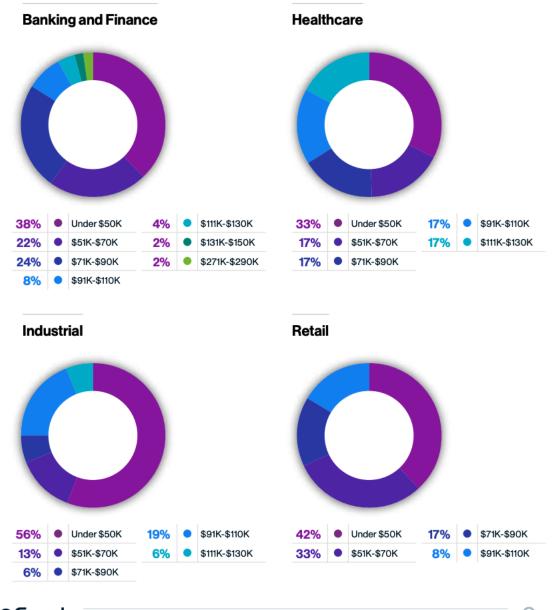
No additional cash compensation has been reported for this role

The average salary for a Cyber Security is \$102,346 in Austin, TX. Salaries estimates are based on 45 salaries submitted anonymously to Glassdoor by Cyber Security employees in Austin, TX.

Overvie	ew Salaries Interviews Ca	areer Pa	th					
- Aust	tin, TX Area 🗸 🗸	or	Employer Name		Search	Sort:	Most Rep	oorts 🔨
Company				Average Base Salar	ry in (USD)		Рори	ılar
o⇔≋ 3.9 ★	IBM Cyber Security Engineer - Hourly Intern 2 salaries See 10 salaries from all locat			About <b>\$21 -\$</b>	<b>33</b> hourly			<b>t Reports</b> <sup>-</sup> y: high
<b>g</b> <u>m</u> ₄ ★	General Motors (GM) Cyber Security Engineer 2 salaries See 5 salaries from all location	ons		About <b>\$78K -</b>	•\$95К		Salar \$78K	r <b>y: low t</b> \$95F
□ 4★	Hewlett Packard Enterprise   HP Cyber Security Engineer 2 salaries See 3 salaries from all locati			About <b>\$80K -</b>	\$130K		\$80K	\$130}
<b>()</b>	Praetorian Cyber Security Engineer 2 salaries See 2 salaries from all location	ons		About <b>\$100K</b>	C-\$109K		\$100K	\$109ŀ
<ul><li>3.7 ★</li></ul>	Texas Department of Public SafeCyber Security Analyst2 salariesSee 2 salaries from all location			About <b>\$73K -</b>	•\$92K		\$73K	\$921







Cynet

2020 Cybersecurity Salary Survey Results

8





Impact of organization's size on the salary.

1 to 50	Under \$50K <b>69%</b> \$51K-\$70K <b>14%</b> \$71K-\$90K <b>9%</b> \$111K-\$130K <b>6%</b>	_
50 to 200	Under \$50K <b>70%</b> \$51K-\$70K <b>13%</b> \$71K-\$90K <b>13%</b> \$111K-\$130K <b>3%</b>	
200 to 500	Under \$50K <b>57%</b> \$51K-\$70K <b>18%</b> \$71K-\$90K <b>11%</b> \$111K-\$130K <b>7%</b> \$111K-\$130K <b>7%</b>	
500 to 1,000	Under \$50K <b>40%</b> \$51K-\$70K <b>20%</b> \$71K-\$90K <b>20%</b> \$91K-\$110K <b>20%</b>	
1,000 to 5,000	Under \$50K 49% \$51K-\$70K 12% \$71K-\$90K 14% \$91K-\$110K 15% \$111K-\$130K 5% \$131K-\$150K 2% \$171K-\$190K 2% \$251K-\$270K 2%	
5,000 to 10,000	Under \$50K <b>44%</b> \$51K-\$70K <b>11%</b> \$71K-\$90K <b>33%</b> \$91K-\$110K <b>11%</b>	
10,000+	Under \$50K 44% \$51K-\$70K 18% \$71K-\$90K 17% \$91K-\$110K 7% \$111K-\$130K 9% \$131K-\$150K 2% \$171K-\$190K 1% \$251K-\$270K 1%	



9

## **SALARY FACTORS / INDIVIDUAL**

Experience



Impact of of number of years in security position on the salary. 1-3 years 10% 4% 42% 25% 18% Under \$50K \$51K-\$70K \$71K-\$90K \$91K-\$110K \$111K-\$130K 4-8 years I 4% 10% 44% 21% 19% 2% Under \$50K \$51K-\$70K \$71K-\$90K \$91K-\$110K \$111K-\$130K \$131K-\$150K 9-15 years 27% 9% 27 27 9% Under \$50K \$51K-\$70K \$71K-\$90K \$111K-\$130K \$131K-\$150K 16 or more years 25 25% 50% \$71K-\$90K \$91K-\$110K \$111K-\$130K

Cynet





Impact of academic degree in CS/engineering on the salary.

#### **Academic Degree** 18% 5% 49% \$71K-\$90K \$111K-\$130K Under \$50K 11% \$91K-\$110K 16% 1% \$51K-\$70K \$131K-\$150K **No Academic Degree** 23% 22% \$71K-\$90K \$51K-\$70K 8% 17% 26% \$111K-\$130K \$91K-\$110K Under \$50K 2% 3% \$131K-\$150K \$131K-\$150K 12 Cynet 2020 Cybersecurity Salary Survey Results



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# **FORTUNE** rankings ~ magazine newsletters

## **Top 10**

Cisco
 Salesforce

3 Hilton

**4** Wegmans Food Markets

5 Rocket Companies

6 UKG

**7** Texas Health Resources

8 Camden Property Trust

**9** Capital One Financial

**10** American Express

## A list

Security Engineer Cloud Engineer

## B list

Security Architect Cybersecurity Analyst Penetration Tester

## C list

Network Engineer Cybersecurity Consultant Software Engineer IT Support

#### Requirements:

- At least 4 years experience in an IT or security function, with at least 2 years of hands-on experience a penetration testing role
   Experience with Python, PowerShell, or similar scripting language
- Experience using industry standard offensive security tools
- You have proven experience pen testing in web applications, network, wifi and cloud computing solution (AWS, GCP, Kubernetes)
- You have a proficiency with enterprise operating systems, including Linux and Windows
- You have practical experience with assessing encryption, IAM systems, VPN and authentication technologies
- You have extensive knowledge of TCP/IP networking and packet analysis
- You pride yourself on your proven attention to detail
- · Excellent, efficient problem-solving skills
- Strong familiarity with at least one of the following. OWASP Top 10, PTES, or NSA Vulnerability and Penetration Testing Standards
- Experience facilitating penetration testing efforts in one or more of the following Compliance frameworks (FedRAMP, PCI, SOCII, HIPAA) Nice-to-haves:
- Nice to naves.
- You have professional-level certifications (OSCP, GPEN, GWAPT, GXPN)
- Experience with higher-level programming languages (C, C++, etc.)
- Experience with API penetration testing
- · Experience with containerization offensive techniques
- Exploit development, vulnerability research, bug bounty submissions

#### Education

- Bachelor's degree in a related field is desired, not required.
- <u>DCSP, CEH, Security+</u> or other security related certifications is desired, not required. Experience:
- 8+ years of experience in information technology, preference to those with development, network, or systems administration experience.
- 6+ years of Penetration Testing

#### Experience

- 2+ years coding experience.
  - Experience with at least three automation and scripting languages e.g.
  - PowerShell, BASH, Python).
     Experience and understanding of HIPAA, HITECH, and PCI preferred.
  - Capture the Flag experience a plus.
  - Bug bounty experience a plus.

#### Knowledge And Skills

- Basic knowledge and understanding of at least six computer programming language (e.g. JavaScript, .NET, AngularJS, Java, HTML, Assembly).
- Effective verbal and written communication skills. Should be able to adapt communication style to suit different audiences.
- Proficient with testing tools such as Burp, ZAP, OpenVAS, Impactor, CME, Wireshark, HackRF, or Metasploit.
   Ability to setup a virtual environment using VMware, Virtual Box, or similar
- Understanding of password cracking and encryption technology.
- Familiarity with exploit development and tool development.

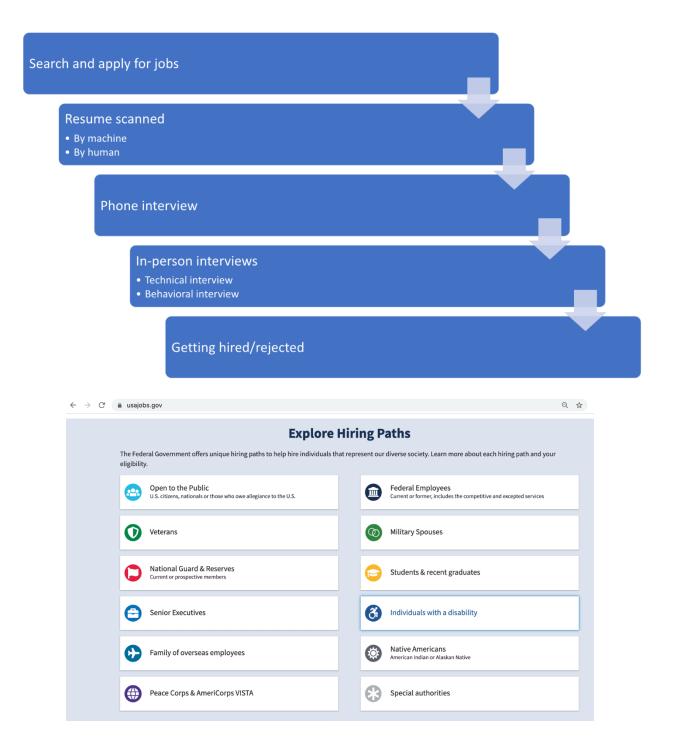
Bachelor's degree in computer science, information assurance, or related technical field or equivalent. At least 7 years' experience in information security administration, offensive tactics, monitoring and IR. At least 3 years' dedicated experience conducting penetration testing/red team engagements as a consultant or previous role in a professional organization. Proficient in scripting languages such as Python, PowerShell, Bash and Ruby. Competent with testing frameworks and tools such as Burp Suite, Metasploit, Cobalt Strike, Kali Linux, Nessus, PowerShell Empire and AutoSploit, Strong operating system knowledge across \*nix, and Windows; proficient with networking protocols. Ability to obtain and maintain persistence within corporate systems, while avoiding detection. Familiarity with defensive and monitoring technologies such intrusion prevention/detection systems (IPS/IDS), security information and event management systems (SIEMS) firewalls, endpoint protection (EPP) and endpoint detection/response (EDR) tools, as well as user and entity behavior analytics (UEBA). Understanding of OWASP, the MITRE ATT&CK framework and the software development life ycle (SDLC).

#### Preferred Skills

Current certifications such as OSCP, OSCE, CEH, GPEN, GWAPT, CREST, CISSP or other relevant certification. Self-starter requiring minimal supervision. Highly organized and efficient. Excellence in communicating business risk and remediation requirements from assessments. Analytical and problem-solving mindset. Demonstrates strategic and tactical thinking, along with decision-making skills and business acumen.

- Experience performing internal and external assessments
- Experience in leading a team during penetration tests
- Knowledge of server (Linux, Windows) and client (Windows, OS X, Linux) operating systems
- Knowledge and understanding of attack surfaces for enterprise systems and services
- Experience in at least one of PHP/Hack, Python, C/C++, Go or Java
- Experience working in cross-functional programs
- · Experience translating technical concepts into language that is understood to audiences including software engineers, business and technical leaders
- 5+ years of experience practicing application security assessments and penetration tests
- · Experience performing and leading whitebox and blackbox style assessments
- · Experience with complex, multi-stage, multi-person pentests for new internal customers or external vendors

Networking knowledge, including network virtualization technologies and ideally IPv6



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	Base salary <b>\$120,000/yr</b> Range: \$90,400 - \$140,000	Med \$90,400	ian: \$120,000	/
		See more insights		
	5,554 company results for "security+engineer"	n		*
	Expedia Group Security Enginee Greater Seattle Area	er salaries	<b>\$116,000/yr</b> Range: \$96,500 - \$140,000	
	Tata Consultancy Services Secu Greater Seattle Area	urity Engineer salaries	<b>\$97,100/yr</b> Range: \$64,600 - \$146,000	
	Amazon Security Engineer salar		\$114,000/yr	

payscale.com/research/US/Job=Cyber\_Security\_Analyst/Salary

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Avg. Base Salary (USD)			Bonus	\$1k - \$12k	
			Profit Sharing	\$508 - \$12k	
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## **Chapter 8: Giving Back to Others and Yourself**





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### **Chapter 9: Trusting the Process**

