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**Lab - Cybersecurity Jobs Hunt**

# Objectives

Explore the career opportunities for cybersecurity professionals.

Explore the career requirements for cybersecurity professionals.

**Part 1: Exploring Cybersecurity Jobs**

**Part 2: Cybersecurity Job Requirements**

# Background / Scenario

The cyber world is full of dangers and threats to individuals, organizations, and countries. These perils have resulted in a major demand for individuals with the knowledge, skills, credentials, and ethics to protect our people and systems. In this lab, you will explore the types of jobs available, job titles, job requirements, and credentials required by the cybersecurity industry. The Internet is full of job search websites that can provide you with information about careers in cybersecurity. Many of these websites are job search sites called job aggregators. This means that they collect job postings from many other sites and organizations. In part one, you will explore three of the world’s most popular job aggregator websites. In part two, you will discover the requirements of cybersecurity jobs.

URL: <http://burning-glass.com/infographic-geography-cybersecurity-jobs-2015/>

# Required Resources

• PC or mobile device with Internet access



# Part 1: Exploring Cybersecurity Jobs

Indeed is one of the world’s largest job aggregators. Indeed helps millions of job seekers and employers find the right fit. The Indeed website posts a wide assortment of jobs from entry-level to top executives. Indeed also posts part-time jobs and internship opportunities.

**Step 1: Explore Cybersecurity Job Postings:**

1. Open a browser and view the following video: “[How to search for jobs with Indeed.com”](https://youtu.be/9gqsnA2Lk-0) (https://youtu.be/9gqsnA2Lk-0)
2. Click [here](http://www.indeed.com/) or got to <http://www.indeed.com/>to perform a job search. Start by looking for all jobs in New York City, USA. Use the phrase **cyber security** for the first search. Record the number of job found.



I found 2,238 jobs about cyber security in New York, NY.

1. Do the same search but use the phrase **information security**. Record the number of jobs found. Did you find more or less job postings? Why?

I found 2,316 job post, the reason is that information security jobs is highly demand today because of the increasing case of cyber-attack.

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1. Repeat these steps using the phrase **network security** for the third search. Record the number of jobs found. Did you find more or less job postings? Why?

I found 2,325 jobs in network security, as the cyber-attack increase also the jobs demand of network security also increases.

**Step 2: Explore Cybersecurity Salaries.**

1. Repeat the first job search by looking for all jobs in New York City, USA. Use the phrase **cyber securit**y. Pick three jobs that interest you. Record the experience required and salaries offered.

1. Security Engineer, Cyber Security

REQUIREMENTS

* Ability to execute tasks with high accuracy and thoroughness, maintain confidentiality while dealing with sensitive information
* Completed a Master's or Bachelor's degree in Information Technology, Information Security, Cybersecurity, Computer Science, or a related field.
* Strong knowledge of networking concepts, including topology, IP networking, protocols, components, and principles. (e.g., L2 switching protocols, L3 routing protocols, BGP)
* Strong verbal and written communication skills with the ability to explain technical concepts to audiences at different levels.
* Skilled in configuring and utilizing network protection components. (e.g., Firewalls, VPNs, IDS/IPS, XDR, EAP-TLS/PKI, SOAR)
* Skilled in protecting a network against malware and relevant threats. (e.g., IPS, anti-malware, restrict/prevent external devices, spam filters)
* Obtained relevant Palo Alto Networks certifications. (e.g., PCNSE, PCSAE, etc.) or can prove equal skills during an interview.
* Proficient in scripting and declarative languages is a plus. (e.g., Bash, GO, Python, HashiCorp Configuration Language HCL)
* Experience configuring email security platforms is a plus. (e.g., Abnormal, Barracuda, Google Workspace, Material, Mimecast, Microsoft O365, ProofPoint)
* Experience with private and public cloud providers is a plus. (e.g., AWS, Azure, GCP, Nutanix, OCI, VMWare)

Salary Offered

$75,000-$180,000 a year

1. Cyber Security Analyst

## Requirements

1. A baccalaureate degree, from an accredited college including or supplemented by twenty-four (24) semester credits in cyber security, network security, computer science, computer programming, computer engineering, information technology, information science, information systems management, network administration, or a pertinent scientific, technical or related area; or  
  
2. A four-year high school diploma or its equivalent approved by a State’s department of education or a recognized accrediting organization and three years of satisfactory experience in any of the areas described in “1” above; or  
  
3. Education and/or experience equivalent to “1” or “2”, above. College education may be substituted for up to two years of the required experience in “2” above on the basis that sixty (60) semester credits from an accredited college is equated to one year of experience. In addition, twenty-four (24) credits from an accredited college or graduate school in cyber security, network security, computer science, computer programming, computer engineering, information technology, information science, information systems management, network administration, or a pertinent scientific, technical or related area; or a certificate of at least 625 hours in computer programming from an accredited technical school (post high school), may be substituted for one year of experience.

## Preferred Skills

* Strong computer, problem-solving, and analytical abilities.
* Comprehensive network security technique, maintaining firewall, network scanning and intrusion detection products and authentication.
* Excellent End User Support skills.
* Written, and Oral communication skills.

Certificates:  
  
Possess one of the following certifications:  
a. Certified Information Systems Security Professional (CISSP )  
b. Certified Information Security Manger (CISM )  
c. Offensive Security Certified Professional (OSCP )  
d. Global Information Assurance Certification (GIAC )  
e. CompTIA Security+,  
f. CEH,

Salary Offered

$75,795-- $113,300 a year

1. Lea Cyber Risk Expert

Requirements

Experience in designing systems and procedures to manage cyber risk from within a company, consulting, regulating or law enforcement. Reformed hackers can still apply

Track record of working on projects

Curiosity to research new ideas is essential.

Willingness to learn new skills and get hands-on with tasks needed to deliver projects

Highly credible to internal and external constituents.

Ability to work independently, think strategically and proven diagnostic ability are critical

Salary Offered

$134,400 - $279,200 a year

1. The Indeed website also advertises internships and part-time jobs. Use the **advanced job search** option to find all **IT Security** internship opportunities in New York City. How many did you find? List a few of the titles.

As I search about IT Security internships opportunity job in New York City, I only found a single job post and it is in titled VP-Internal Audit.

1. Use the **advanced job search** option to find all **IT Security,** part-time opportunities in New York City. How many did you find? List a few of the titles.

I found 18 post jobs available. List of few jobs title; Technical Coach, Cybersecurity, Security Guard Tier 2, part ime evening, Information Technology, Schools of Cybersecurity And information.

# Part 2: Cybersecurity Job Requirements

The cybersecurity field requires individuals with a high level of skill and knowledge. Many organizations require both academic and industry credentials to demonstrate the attainment of this knowledge and skill. Two very popular job search websites are CareerBuilder.com and USAJobs.gov. The websites list hundreds of cybersecurity related jobs.

**Step 1: Explore Careerbuilder.**

1. Open a browser and view the following video: [CareerBuilder: Twenty Years, One Solution.](https://www.youtube.com/watch?v=FVXCnqKVFKs) [(https://youtu.be/FVXCnqKVFKs)](https://youtu.be/FVXCnqKVFKs)
2. [Click here or go to http://www.c](http://www.careerbuilder.com/)areerbuilder.com to perform a job search at CareerBuilder.com. Start by looking for all jobs in San Francisco, California, USA. Use the phrase **network security** for the first search. Record the number of jobs found.

I found 60,183 Network Security Jobs in San Francisco, California, USA.

1. Select two jobs that list a salary. What is the salary range listed?

Network Security Administrator and Lead Network Security Engineer with the salary range of $80,000 - $135,200/year.

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1. Open the two jobs you used in the previous step. What credentials were required (academic degrees and certificates)? Did the organization require industry certifications? Please list the academic and industry credentials required.
2. Network Security Administrator

• Required Qualifications:

• Bachelor's degree or equivalent combination of education and 8 years of experience in computer science, computer engineering, mathematics or related field

• 3 Years of Demonstrated management and leadership experience in a 24x7x365 SOC or NOC

• Experience with SIEM, IDS/IPS, Firewall, Web Application Firewalls, EPP, EDR and Security Event Correlation

• Excellent analytical and problem-solving skills

• Experience with technical writing

• Possess an understanding of security standards and risk management

• Have excellent written and verbal communication skills

• Possess the ability to adjust and adapt to changing priorities in a dynamic environment

• Be able to multi-task and be pro-active in addressing issues and requests

• Possess technical acumen and the ability to understand and interpret technical specifications

• Evaluates potential business impacts from security breaches and provides guidance to business decision-makers.

• Develops and executes security systems compliance policies and procedures. Selects, develops and evaluates personnel to ensure the efficient operation of the function.

• Minimum 7 years experience in the Information Security field required.

Preferred but not required qualifications include:

• Bachelor-level university degree in a relevant field from an accredited university, or equivalent.

• 3 or more years of successful management experience including 1 or more years as a first level manager.

Network Security, Cyber Security, Cyber Defense, Cyber Threats, Cyber Risk, Comptia Security+, Security, Security Administration

1. Lead Network Security Engineer

Education and Experience »

At least 15+ years of network-related experience

A college degree in a related field is preferred

Experience creating and following change control-related processes

Experience with device local authentication, TACACS+, or RADIUS authentication

Certified Cisco Internetwork Expert (CCIE) required

Driver’s License required

Knowledge, Skills and Abilities »

Familiarity with SNMP, Solar winds, or equivalent Network Management platforms

Excellent with EIGRP, and OSPF routing protocols

Knowledge (or ability to learn) of Cisco Stealth Watch, Cisco Flow Collector, Cisco Flow Sensor, NetFlow, Cisco DNS Umbrella, Cisco Firepower firewalls, Cisco ISE; ability to troubleshoot with Wireshark

Excellent Customer Service and communication skills (verbal and written - Visio)

Must be able to pass a TSA background check, and drive

Knowledge of NX-OS, Cisco ISR, and Cisco ACI technologies

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**Step 2: Explore USA Government Jobs.**

1. The federal government has been the target of many high profile cyberattacks. As a result, many federal agencies need cybersecurity professionals. Click [here](https://www.youtube.com/watch?v=f3vRr3Lq-zI) or go to <https://youtu.be/f3vRr3Lq-zI>to view a video about USAjobs.gov. Click [here](https://www.usajobs.gov/) or go to [https://www.usajobs.gov](https://www.usajobs.gov/) to visit the USAJOBS website. Search **Information Security** as the Job Title. How many jobs did you find?

I found 20 jobs available in Information Security.

1. Scroll through the first page of job listings. Count the number of federal agencies listings jobs on the first page.

There are 20 federal agencies list.

1. List three of the salaries posted on the first page.

* It Specialist(INFOSEC)- Direct Hire- Staring Salary $103,689
* Lead IT Specialist(INFOSEC)- DIECT HIRE- Starting at $144,128
* Supervisory Program Analyst = Starting at $76,387