**Đặng Hoàng Nguyên – SE171946**

**Use your favorite search engine to conduct a search for the most popular cybersecurity-related certifications. List them below with the organization that provides the certification**

* Certified Information Systems Security Professional (CISSP)
* Certified Information Systems Auditor (CISA)
* Certified Information Security Manager (CISM)
* CompTIA Security+
* Certified Ethical Hacker (CEH)
* GIAC Security Essentials Certification (GSEC)
* Systems Security Certified Practitioner (SSCP)
* CompTIA Advanced Security Practitioner (CASP+)
* GIAC Certified Incident Handler (GCIH)
* Offensive Security Certified Professional (OSCP)

**Pick three certifications from the list above and provide more detail about the certification requirements and knowledge gained i.e.: vendor specific or neutral, number of exams to gain certification, exam requirements, topics covered etc.**

* CompTIA Advanced Security Practitioner (CASP+)

+ The exam covers advanced topics like enterprise security domain, risk analysis, software vulnerability, securing cloud and virtualization technologies, and cryptographic techniques.

+ The CASP+ can open up opportunities for advanced roles in architecture, risk management, and enterprise security integration.

+ CompTIA recommends it only for experienced cybersecurity professionals with at least ten years of IT administration experience (including five years of broad hands-on experience with security).

* GIAC Certified Incident Handler (GCIH)

+ Understanding of offensive operations, including common attack techniques and vectors and your ability to detect, respond, and defend against attacks. The certification exam covers incident handling, computer crime investigation, hacker exploits, and hacker tools.

+ This certification is meant for anyone working in incident response

+ There are no formal prerequisites for taking the GCIH exam, though it’s a good idea to have an understanding of security principles, networking protocols, and the Windows Command Line.

- Offensive Security Certified Professional (OSCP)

+ The OSCP from Offensive Security has become one of the most sought-after certifications for penetration testers. The exam tests your ability to compromise a series of target machines using multiple exploitation steps and produce detailed penetration test reports for each attack.

+ There are no formal requirements to take the exam. Offensive Security recommends familiarity with networking, Linux, Bash scripting, Perl or Python, as well as completion of the Penetration Testing with Kali course.

**How many new job listings were posted within the last two weeks?**

4536 cyber security Jobs

Graphical user interface, text, application, email

Description automatically generated

**What is the salary range for the top 10 listings?**

From $50k to $154k a year

**Graphical user interface, application

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**What are the most common qualifications required by employers?**

* Experience in UNIX and UNIX-like operating systems
* Participation in a change management process
* Microsoft Server
* Cisco network experience
* Background in general IT administration and support

**What industry certifications are required by these employers?**

GSEC, GCIH, GCIA, GPEN, OSCP, other relevant certifications within Cyber Security

**Do any of the certifications match the ones that you found in Step 1a?**

Yes

**Investigate online resources that allow you to legally test your hacking skills. These tools allow a novice with limited cyber security experience to sharpen their penetration testing skills. One such site is Google Gruyere (Web Application Exploits and Defenses). What kinds of challenges can you find?**

* XSS (Cross-Site Scripting)
* Client-State Manipulation
* Cross-Site Request Forgery (XSRF)
* Cross Site Script Inclusion (XSSI)
* Path Traversal
* DoS (Denial of Service)
* Code Execution
* Configuration Vulnerabilities
* AJAX Vulnerabilities
* Buffer Overflow and Integer overflow
* SQL injection

Text, timeline

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