

Penetration Tester Career Research
Craig Coleman
Tri-Tech Skills Center

Penetration Testing is the process of finding security problems with networks and computers. The job market for Cyber Security technicians is 100,000 good depending on the skill of the person seeking employment. In 2016 there were 100,000 jobs available. (bls.gov). "According to Tyson Meadors, the Director of Cybersecurity Policy at the National Security Council, the federal government has 285,000 open positions relating to cybersecurity, a labor shortage that represents a national security threat amid increasing efforts by foreign actors to penetrate both government systems and privately-controlled networks critical to national infrastructure." (Cordell, C.). To supply employees to fill this void educational institutions such as Columbia Basin College in Pasco Washington have started programs specific to Cyber Security (Computer Science Degrees/Certificates). Columbia Basin College (CBC) has an array of four year, two year, one year certificate, and single skill certificates.

While researching Penetration Testing careers I found the majority of the positions asked for employees to have a few years of experience. I did find a position from <https://seeker.worksourcewa.com> with American Express credit cards. The job required a Bachelor's Degree in Computer Science, Information Systems, or other related field preferred. The salary was not posted for the American Express job. There was another posting in Issaquah, WA working for Pinnacle Group. The job required an A+ certification and one to two years of experience.

The skills required by a Penetration Tester are vast. Penetration Tester or Cyber Security technician have to have a wide variety of skills and understanding of a variety

of operating systems and networking methodologies. In an article titled: How to Become a Penetration Tester the following are a list of preferred skills:

- Perform formal penetration tests on web-based applications, networks and computer systems
- Conduct physical security assessments of servers, systems and network devices
- Design and create new penetration tools and tests
- Probe for vulnerabilities in web applications, fat/thin client applications and standard applications
- Pinpoint methods that attackers could use to exploit weaknesses and logic flaws
- Employ social engineering to uncover security holes (e.g. poor user security practices or password policies)
- Incorporate business considerations (e.g. loss of earnings due to downtime, cost of engagement, etc.) into security strategies
- Research, document and discuss security findings with management and IT teams
- Review and define requirements for information security solutions
- Work on improvements for security services, including the continuous enhancement of existing methodology material and supporting assets
- Provide feedback and verification as an organization fixes security issues

Being able write and read code in an array of languages would be beneficial to success in the career. At CBC C/C++ , Java and SQL are a degree requirement.

Additionally CBC requires UNIX/Linux for degree completion. Have practical skills is just as important if not more important than having a degree. College is expensive and

being in debt with college loans can be a burden to person wanting to live independently. The YouTube video "Success in the New Economy" states for every ten jobs in the United State one job requires a Doctorate or Masters degree, two jobs require a two year degree and the remaining seven require no training or some type of technical training. In other words most of the jobs do not require a college degree.

In closing Penetration Testing / Cyber Security careers will be plentiful in the coming years. One skill essential for Cyber Security specialist will be command line in Linux and Windows. Using both Powershell and CMD in Windows will be a fundamental. As for Linux one of the major software tools used for testing is Kali Linux so having skills using Linux is essential. On a personal note to prepare myself to teach Linux I have two the seven Linux computers running on my home network at one time. I have been a Linux user since 2001. I started using Suse and Redhat Linux after attending Oracle University SQL Training and I haven't looked back since. Additionally I have a Macintosh Mini (MacMini) running OSX. The MacMini will be upgraded to High Sierra shortly. I have one Windows 10 system that I use for work and that system also dual boots to Debian Linux. On my home network I use Gentoo Linux and Debian Linux. The Gentoo Linux system is running on a custom build with a Asus Motherboard and AMD processor. The Debian Linux systems include a Lenovo desktop running an Intel Duo Core and 16 Gigabytes of RAM . The remainder of the Linux computers are Raspberry Pi's. I have one Raspberry dedicated to configuring my Ubiquiti Long Range Access Point. The above network uses a Ubiquiti Edge Router. I have also ran Redhat and Centos in the past.

References

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PLACEHOLDERS:

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