



Security Engineer

WHAT DOES A SECURITY ENGINEER DO?

Security Engineers provide expertise around the systems and processes needed to maintain the security of information. Their work serves to protect the confidentiality, integrity and availability of an organization's systems and application data. They integrate themselves into the organization and determine security requirements, plan/implement/test security systems, and establish best practices across the organization.

Day-to-Day Expectations and Responsibilities

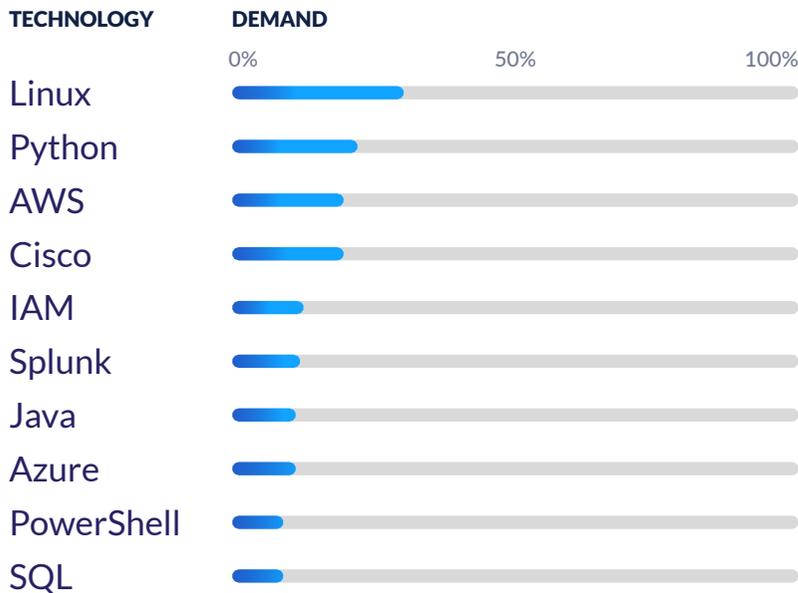
-  **Build, maintain the automated systems** that test for front- and back-end security vulnerabilities
-  **Develop and evangelize security** best practices across the organization
-  **Review system and application logs,** verifying completion of critical scheduled jobs such as backups
-  **Implement physical protection mechanisms** such as firewalls and VPN tunnels
-  **Configure monitoring for key systems daily** to verify the integrity and availability of all hardware, server resources, and critical processes
-  **Repair and recover from hardware or software failures,** coordinating and communicating with impacted teams

Key Traits of a Security Engineer

-  **Perceptive:** A Security Engineer must be perceptive and know what to protect. They must be able to understand how a threat might try to exploit vulnerabilities.
-  **Attentive to Detail:** With external threats evolving quickly, Security Engineers must be able to work quickly and with attention to detail, making sure not to further compromise company systems.
-  **Well-Rounded:** Security Engineers must possess both technical skill and the ability to communicate security threats to non-technical stakeholders.
-  **Resilient:** Security threats are constantly changing. Resiliency and curiosity are required to identify threats before they become a reality.

SECURITY ENGINEER

Trending Technology Skills for Security Engineers



*Figures represent the share of all Security Engineer job postings analyzed that require a given skill. Data as of October 1, 2018. View this week's data [here](#).

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Security Engineer Target Skill Set

Technical Skill Set

- ✓ Data encryption and key management
- ✓ Cloud-native and cloud authentication mechanisms
- ✓ Cloud governance tools
- ✓ Firewall tools
- ✓ Networking hardware and software tools
- ✓ Identity, security, and access management tools
- ✓ Application security, data protection, and cryptography

Non-Technical Skill Set

- ✓ Critical thinking and problem solving capabilities
- ✓ Ability to communicate and listen to needs from organizational stakeholders

Starter Training Plan for Security Engineers

The following Cloud Academy courses and training plans prepare professionals to become Security Engineers. [Learn More About Training Plans >](#)

 **Amazon Web Services**

[AWS Security Services](#)

[AWS Auditing & Monitoring](#)

[Security - Specialty Certification](#)

[Preparation for AWS](#)

 **Microsoft Azure**

[Azure Services for Security Engineers](#)

Industry Certification(s) for Security Engineers

After taking courses with Cloud Academy, Security Engineers can consider the following certifications.

 **Amazon Web Services**

[AWS Security Specialty Certification](#)