

RED BALLOON SECURITY, INC.

EMBEDDED DEFENSE

Python Engineer

About Red Balloon Security

Red Balloon is a cyber security company headquartered in New York City. Our mission is to provide embedded device manufacturers with strong host based security. Embedded devices are the non general-purpose computers that run the modern world. We believe all embedded devices require stronger protection against malware and intrusions. The company was started in 2011 and became a Columbia Portfolio Company and a Microsoft Ventures Accelerator Company.

Our Products

Our technology was developed in connection with Columbia University and the Department of Defense. We created a means to inject Symbiote host-based security onto any device, regardless of CPU type, regardless of functionality, regardless of operating system and without changing the performance and functionality of the device. We don't require access to customer source code, and we don't require manufacturers to change their product design.

Symbiote

Installed by the device manufacturer into a device using either an Integration Appliance or via the manufacturer's firmware update process.

These manufacturers cover key markets including enterprise equipment, unified communications, SCADA, Internet-of-Things, Internet infrastructure switches and more.

AESOP Enterprise Embedded Security Monitor

Used by Enterprise IT management to integrate and report on situational awareness of embedded devices under their management.

Job Description

- Write awesome python.
- Develop, test and maintain in-house FRAK (Firmware Reverse Analysis Konsole) framework.
- Scale reverse engineering and binary analysis toolchain towards a cloud-based infrastructure.
- Optimizing performance of core backend when dealing with expensive operations over massive sets of binary data.
- Collaborate with security research staff to design and implement the infrastructure for the deployment of host-based defense software for black-box embedded devices.
- Streamline distribution of core product libraries and software toolkit.
- Design and develop large-scale automated test farm.
- Secure all the things.

Required Skills and Qualifications

- BA/BS required in computer science, engineering or related major.
- Experience with low-level software design and implementation.
- Understanding of modern software design and engineering practices.
- High level of self-initiative and self-motivation.

Preferred Skills and Qualifications

- Experience with ARM / MIPS / PPC assembly languages.
- Strong understanding of OS design and implementation.
- Strong understanding of software vulnerabilities and practical exploitation techniques.
- Proficiency in hardware and software reverse engineering.

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Red Balloon Security is an Equal Opportunity Employer of minorities, women, protected veterans, and individuals with disabilities.

