Samuel Henrique

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Summary

- Software developer, passionate about Open Source/Free Software, Linux, Debian and security.
- 10+ years of experience.
- Develops and maintains services and tools written in Python and Rust on AWS.
- Volunteer of the Debian project as a Debian Developer, doing .deb packaging, fixing CVEs, mentoring people.
- Experienced .rpm packager on Amazon Linux, provides patches to Fedora and CentOS as part of that work.
- Knowledgeable about a variety of build systems and programming languages, as a result of the packaging work.
- Team player, mentors newcomers to the Debian project and has trained the majority of the Amazon Linux organization in .rpm packaging and CVE fixing.
- Well-versed in the basics and has taught many co-workers fun tricks with git, Linux, vim, bash, scripting...
- Experienced in assessing and fixing CVEs for both Debian and Amazon Linux, besides packaging of security tools.

Skills

Languages: Python, Rust, Bash/Shell Script, C, TypeScript.

Software/Tools: AWS, Amazon Linux, Debian, AWS Lambda, AI, .rpm packaging, AutoGluon, AWS StepFunctions, Bash, Build Systems, CDK, CloudFormation, CloudWatch, Containers, CVE Assessments, CVE Fixing, CVSS, .deb packaging, Debugging, Docker, DynamoDB, EC2, ElastiCache, ElasticSearch, Free Sotware, git, Grafana, IAM, Kibana, Machine Learning, Make, neovim, Open Source, PostgreSQL, RDS, Redis, Security, SQS, System Designing, tmux.

Experience

Amazon Web Services - AWS, Systems Development Engineer II
<div align="right">Dublin, Ireland
2018 - Present</div>

- Develops and maintains Rust and Python services used for evaluation, triaging, and publishing of CVE data.
- As operational work, on a rotation: performs CVE assessments, defines CVSS scores, develop and ship CVE fixes for Amazon Linux's packages.
- Designed and lead project that pioneered automated validation of CVE assessments' data. Used Rust, Python, AWS Lambda and DynamoDB deployed with CDK on TypeScript. Split the tasks of the project between 3 co-workers that helped.
- Designed a cross-team project that required coordination of both the backend and frontend teams to provide more granular CVE evaluation data to customers. Required a PostgreSQL schema migration and reaching agreements around the public facing change as it was a one-way-door decision. 5 different co-workers helped with the tasks.
- Designed and implemented a backend change that allowed for CVE evaluation data to be automatically pushed through internal systems and pushed to a public endpoint, thus allowing all CVE evaluation data to go live instantly. Python service running on RDS with PostgreSQL (with a schema migration required) and deployed with CDK on TypeScript.
- Provided training and documentation for .rpm packaging and CVE fixing, recordings used across the whole organization to train more than 200 engineers. Covered handling of CVEs under embargo.
- Created a maintenance plan for the cryptography/security-related packages for the initial release of Amazon Linux 2023. Split the resulting tasks with 3 other co-workers and updated 25 packages. Ensuring there were no bugs shipped and making it easier to achieve FIPS 140-3 certification.
- Part of 3 company-wide v-teams: Open Source Champion, Security Guardian and Speaker-certified.
- Participated in 5 Machine Learning/AI internal courses and competitions, covering: the principles of neural

Debian, Debian Developer
<div align="right">Remote
2016 - Present</div>

- Manages the Security Tools Packaging Team, handling security related packages and porting Kali Linux packages to Debian. The team is responsible for 275 packages (as of 2023).

- Maintains key-packages that are not part of the Security Tools Packaging Team; curl, rsync, shellcheck...
- Responsible for patching packages written in: C, Python, Rust, Ruby. With required understanding of their build systems.
- Mentors newcomers to the project, teaches .deb packaging. Reviewed and uploaded the first package of 12 new contributors (as of 2023).
- Assesses and fixes CVEs (through backporting) from packages on all supported Debian releases, the most common case is curl which on average releases CVEs every couple of months. Includes processing and fixing CVEs that are under embargo.
- Helped organize Debian events: DebConf and MiniDebConf.
- Speaker at IT events such as Campus Party, MiniDebConf, DebConf, universities' talks.

Google Summer of Code, Debian Mentee
Remote
2018/05 - 2018/08
- Project: Port Kali Packages to Debian
- Added 13 new Kali Linux packages into Debian, maintained under the Security Tools Packaging Team.
- Opened 10 pull requests against upstream projects on GitHub.
- Reported 5 issues against upstream projects on GitHub.

MadeiraMadeira, DevOps Engineer
Curitiba, Brazil
2016 - 2018
- DevOps for CentOS and Debian servers.
- Implemented Jenkins as a CI and CD tool for developers to use.
- Implemented the first deployment of Grafana used for monitoring, integrated with Zabbix, AWS Cloud-Watch and ElasticSearch.
- Designed and implemented a zero-downtime automated deployment system, triggered by git tags. Moved developers away from the old process of getting ssh access into a production server to manually trigger the deployment. The system relied on capistrano and was fail-safe against non-AWS outages due to a mirror of the GitHub repositories, also part of the project.
- Upgraded the infrastructure from Varnish 3 to Varnish 4.
- Created a central logging solution based on ELK and managed alerting systems based on AWS Cloud-watch, Datadog and Newrelic's APM.
- Created the Docker images used for the initial adoption for developer's environment setup and tests.
- Responded to incidents, prioritizing the quick recovery of the services.
- Managed a very dynamic e-commerce infrastructure at AWS which received high spikes during Black Friday.

Federal University of Technology - Paraná, IT Technician Intern
Curitiba, Brazil
2014/11 - 2016/10
- Deployed a library search engine containing all of the university's open data material, done using the VuFind project. Used by the whole university (including all campuses).
- Contributed to the VuFind project on GitHub.
- Managed the OJS (Open Journal Systems) instance, used to host the scientific publications for the whole university (including all campuses).
- Contributed to the OJS project on GitHub.
- Identified a vulnerability in the way password hashes were stored in the journal system and fixed it for all accounts.
- Identified a security incident where the journal system website got defaced only for the Google crawler bot (hid the site from Google searches as impact).
- Identified a critical issue with the images used for the Debian servers across the university, result of a bad release upgrade process.

Federal University of Technology - Paraná, IT Technician Intern
Toledo, Brazil
2011/05 - 2012/12
- Supported all Windows and Linux machines, including labs of all departments.
- Planned and and deployed OCS-Inventory, integrated with Windows AD and GLPI, across whole campus.
- Customized and used GLPI as a helpdesk system.
- Learned Windows and Linux server administration: monitoring, auditing, management, deployments.

Education

Computer Engineering, Federal University of Technology - Paraná

2013 - 2018/did not complete

Information Technology Technician, Federal University of Technology - Paraná

2009 - 2012