Christopher Tarquini, Systems Security Engineer

hireme@tarq.io | 856-336-8277 | Philadelphia, PA

https://blog.tarq.io | https://stackoverflow.com/users/148766/christopher-tarquini | https://github.com/ilsken |
https://hackerone.com/tarq

SUMMARY

Skilled application security engineer, system administrator, and developer with experience with a diverse range of technologies. Thrives in environments that encourage self-directed learning and autonomy.

EXPERIENCE

Linode, Systems Security Engineer   2017-10-01 — Present
https://linode.com

- Managed Linode's official bug bounty program by validating, triaging and mitigating incoming reports from employees and HackerOne researchers.
- Validated, triaged, and mitigated incoming reports from Employees and researchers in our bug bounty program
- Worked with operations/development teams to integrate security into their existing workflows. Since these new processes have been in place, the rate of bugs discovered in new releases has dropped dramatically.
- Created Security.js to automatically mitigate universal client-side exploits such as tab-nabbing and sensitive parameter leakage via referrers.
- Replaced Linodes legacy identity management system with FreeIPA/Duo
- Created reports and post-mortems for executives and management summarizing threats/risks to maintain a regular interdepartmental cadence on security issues and efforts

Linode, Technical Lead   2016-05-01 — 2017-10-01
https://linode.com

- Established configuration best practices for Professional Services Team to ensure consistent and correct deployments
- Trained Professional Services Team on technologies utilized during project deployments ranging from simple LAMP stacks to complex investigations and high availability deployments
- Investigated and developed solutions for high availability deployments of critical infrastructure such as MySQL database clusters
- Trained team to utilize debugging and analysis tools such as Percona Monitoring And Management, XDebug, cachegrind, strace, pt-query-digest
- Provided point of contact for our high-touch fully managed clients

Linode, Implementation Specialist   2015-07-01 — 2016-05-01
https://linode.com

- Performed discovery with Clients to determine which technologies/infrastructures were a fit for their project goals and requirements
- Responsible for lead intake and management. Maintained the highest conversion rates on our team during my tenure
- Executed projects ranging from stack deployments to complex replicated clusters with automated failover using technologies such as Galera, MySQL Replication Manager, KeepAlived, and CoroSync Pacemaker
- Compromised system investigation and recovery

Self-Employed / Freelance, Developer   2013-05-01 — 2015-07-01

https://tarq.io

- As a freelancer my primary focus was software development, specializing in backend services written in Node.JS, PHP, and C++. During this time I became very taken with Node and leveraged this to gain skills in frontend development as well, focusing on utilizing frameworks such as Bootstrap and Angular.
- Wrote several chrome web extensions / web applications utilizing Node, Javascript, PHP (Symfony, CakePHP)
- Managed advertising campaigns, A/B testing, and support my personal projects which gained over 15k users via Chrome Web Store and Facebook
- Created and contributed to open source projects such as a C++ Signal/Slot library and Javascript Schema/Model library

Whitefire Media LLC, Developer   2012-06-01 — 2013-05-01

https://wfnetwork.com

- Custom client facing applications written in CakePHP utilizing Bootstrap for the frontend
- Administrated AWS deployment (EC2, SNS, RDS, S3)
- Created custom backend server for handling affiliate link routing, tracking and display written in Node.JS
- Created customer frontend for HasOffers API and custom "Content Locking" widgets for an affiliate platform
- Reduced operating costs by more than half by replacing the previous ad-display service and optimizing the backend infrastructure

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PUBLICATIONS   **Bypassing MaxScale's Firewall and Masking rules, Tarq.io**   2019-03-15

https://blog.tarq.io/maxscale-firewall-bypass/

- Researched exploiting differences between MaxScale's query parser and parser in the backend servers to bypass firewall and masking rules.

Nginx Root Privilege Escalation, Tarq.io   2017-03-09

https://blog.tarq.io/tag/nginx-privilege-escalation/

- Series of articles showing how multiple applications that manage configuration for nginx, such as VestaCP and Wordpress/W3TC, can be used to gain root privileges on a system by injecting malicious nginx configuration to change the ownership of root-owned files.

Node.JS HTTP Request Smuggling, Tarq.io   2016-09-26

https://blog.tarq.io/node-js-request-smuggling/

- An article highlighting the ability for an attacker to inject arbitrary requests via malicious input provided to Node's built-in http client library in the path parameter. After publication, the Node team reversed their decision not to patch this vulnerability and pushed an update mitigating it shortly after.

SKILLS   **Application Security** *(Expert)***:** penetration testing, code review, risk assessment, risk management, mitigation, triage, bug bounty

MySQL *(Expert)***:** sql, query optimization, tuning, disaster recovery, high availability, replication, innodb, data-recovery

Software Development *(Advanced)***:** C, C++, Rust, Javascript, Perl, Bash, Perl, Python

Linux System Administration *(Advanced)***:**

Software / Tools: MySQL, MRM, KeepaliveD, GlusterFS, Ceph, BURP Suite, MITM Proxy, ELK Stack, FreeIPA, Vault, RethinkDB, Prometheus, HubbleStack

DevOps: Ansible, Salt Stack, Jenkins (CI/CD), Docker, Artifactory

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