



slim.ai

& PaymentWorks



PaymentWorks Fully Automates Container Hardening in the CI/CD Pipeline

Secure payments platform eliminates 89% of container vulnerabilities with no additional developer overhead

ABOUT PAYMENTWORKS

An enterprise payments security platform, PaymentWorks protects organizations from business payments fraud and ensures regulatory compliance by automating a complex, manual, people-intensive, and error-prone payment process.



BACKGROUND

It is critical to PaymentWorks' success that they ship new features quickly while meeting strict security and compliance requirements. PaymentWorks first partnered with Slim.AI in 2021 to move away from their legacy "VM-based" approach and integrate a new containerized microservice with Slim's suite of developer tools. They quickly discovered that Slim's container management features were helping them to onboard their many new developer hires by creating a common workflow.

"If you have multiple development teams, they employ different patterns for how code comes together to form services," said PaymentWorks CTO, Alan Greenblatt. "These patterns can be wildly inconsistent and poorly documented, and the knowledge to run them is often tribal, at best. It's usually the job of DevOps to codify these idiosyncrasies, and there's never enough DevOps support to go around."

Using Slim.AI reduced operational complexity, error, and repetitive DevOps cycles by empowering developers to easily review artifacts, analyze and debug their containers via their choice of Slim's web-based UI or command-line interface.

Several recent attacks, breaches, and exploits have made security a top priority in fintech, including at PaymentWorks. Determined to enact security best practice without sacrificing the developer velocity gains they've made, PaymentWorks again turned to Slim to scale and automate container hardening for their increasing number of microservices.



"We want our developers to be able to stand up a micro-service on their own without having to be deep experts in pipelines, deployments, or container security. That type of developer experience is possible with Slim.AI."

- Chris Hope

Principal Engineer and
key DevOps leader

Security impacts in fintech

January 2022

FTC warns companies to urgently remediate Log4j vulnerability

April 2022

A server-side request forgery (SSRF) flaw is discovered in an API of a fintech platform that could potentially have compromised millions of bank customers

August 2022

NSA releases guidance, "Securing the Software Supply Chain for Developers"

September 2022

President Biden issues Executive Order on Improving the Nation's Cybersecurity

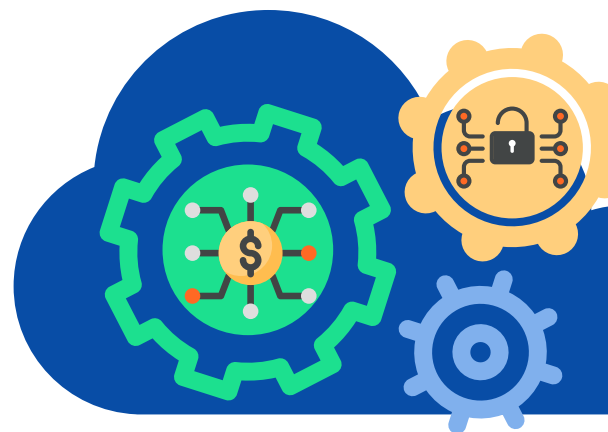
September 2022

Many B2B fintech firms report that customers are requesting zero vulnerabilities in addition to SBOMS

CHALLENGES

Like many engineering orgs, PaymentWorks does not have team members with deep container security expertise, or the luxury of being able to divert any of their developers to security training. Vulnerability management needed to slot into their existing developer workflows with minimized disruption to existing delivery commitments. Maintaining an accurate SBOM at cloud-native speeds was also a challenge.

"The friction that PaymentWorks was experiencing is very common; we've experienced it ourselves at companies large and small," says Slim.AI CEO John Amaral. "For all the progress we've made in cloud-native and DevOps, shipping production-ready containers is still difficult for many organizations to do efficiently."



SOLUTION

In July 2022, Slim.AI launched their continuous supply chain security solution complete with automated container hardening. PaymentWorks was deep into their conversion to microservices for their Python-based application, and in need of a container optimization solution. "Engineers are so focused with getting work out the door that they don't have time to focus on the security of new packages," said Matias Elgart, VP, Platform Engineering for PaymentWorks.

The two companies worked together to transition PaymentWorks from Jenkins to GitHub Actions, Terraform Cloud, and ECS. This allowed Slim's Scan, Optimize and Container Diff capabilities to be baked into PaymentWorks' workflow via GitHub Actions. The PaymentWorks Platform Engineering Team carved out a single service to use as the template for a "golden path" from development to production, in which Slim would provide the vulnerability scanning and optimization. Following successful tests, PaymentWorks is now automatically shipping slimmed code as part of their production CI process.

Solution components

- Slim.AI Developer Platform
- Python/Django
- GitHub Actions
- Terraform & ECS
- AWS
- Docker containers
- Docker Compose



RESULTS

PaymentWorks' first container to ship reduced total vulnerability count by 89%, eliminating all Critical, and 60% of High risk findings. Following this success, PaymentWorks is implementing the solution across all their containers.

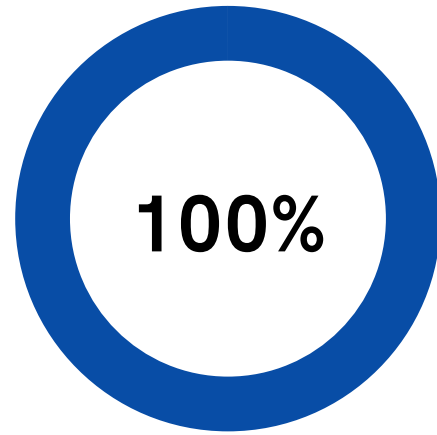
Every time a code is merged, it kicks off a new build and Slim generates a new hardened container. Slim automatically keeps track of all container versions for each collection, runs vulnerability scanners, hardens containers, and generates artifacts for compliance.

Working with Slim.AI, PaymentWorks has reached their combined goals of improving security and compliance while reducing operational complexity, error, and repetitive DevOps cycles, freeing up their teams to focus on building great software for their customers and creating a positive developer experience.

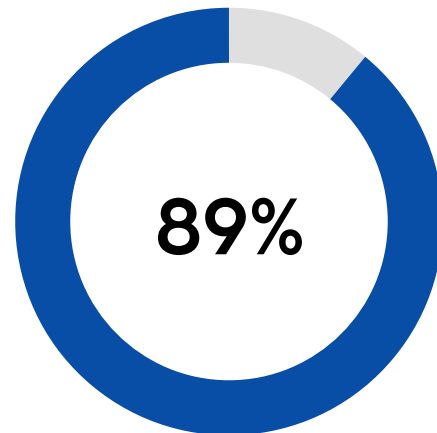
"Our current setup with Slim.AI deploys 10X faster than before."

- **Tate Allen**

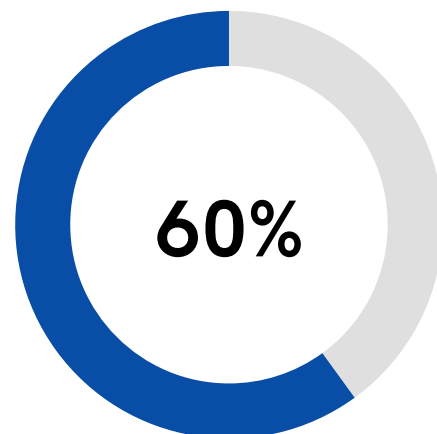
Developer



**Critical
Vulnerabilities Removed**



**All Container
Vulnerabilities Removed**



**High Risk
Vulnerabilities Removed**

BENEFITS OF SLIM.AI

- Automatically minify and harden your container images
- Eliminate the hassle of managing containers and artifacts
- Speed up test pipelines, reducing time to deployment
- Automate “slimmed” workflows in CI/CD

Slim.AI is currently in Early Access and available for free to individual developers who are interested in testing its initial feature set. A broader range of capabilities — including many of those mentioned here — is available to select design partners.

Contact partners@slim.ai for more information.

