



KEY BENEFITS

- Deploy updates confidently with no fear of bricking devices
- Flexible: supports both fleet-level and standalone deployments
- Easy integration to existing process with minimal dependencies

WHY MENDER?

- Permissive OSS license (Apache 2.0) with Yocto integration
- User friendly; extensive documentation, intuitive UI
- Ability to update everything, including applications and kernel

Company Biography

Kinestral (<https://www.kinestral.com>) is transforming glass into responsive, intelligent, beautiful architectural elements that transition from clear to tinted to dark, automatically or on command. Kinestral is transforming architecture and design by offering a much more versatile architectural element for **windows**, **skylights**, and **walls**. Kinestral is transforming buildings, homes – and eventually cities – to be more sustainable, efficient, and beautiful.

Challenge

A robust software update mechanism was needed for Kinestral's gateway-based solution for their intelligent windows. Reliability was a primary concern and there was unease in deploying software updates, particularly about the possibility of bricking their devices.

Despite risks associated with updates, deploying bug fixes, security updates, and new features were critical requirements for the Gateway product. This necessitated the development or integration of a robust OTA solution.

The specific requirements included:

- A failsafe approach with rollback
- Atomicity
- A mechanism low in maintenance
- Open source without vendor lock-in
- Ability to update everything, including application and kernel layer

Solution

Kinestral investigated many open source options that could update their Linux-based gateways and Mender stood out as the most reliable and secure option. A basic requirement included integration with the Yocto Project, which initially generated interest in Mender. It was clear when the evaluation was underway that Mender focused on usability and ease of integration, as well as being well-tested with more than a 70% test coverage. It was apparent that the Mender release was stable with clear documentation and a responsive developer community.

Benefits

Mender provides the confidence in deploying new updates. *Mender works and delivers on all of its promises. Security is not an afterthought*, said Jason Litzinger, Senior Software Engineer at Kinestral. *Typically, you have to do a gut check before deploying an update. With Mender, it removed that fear. We now update our devices with confidence.*

With a robust and secure mechanism to update their field-deployed gateways, Kinestral can now focus on transforming lives by giving people unprecedented comfort and control of their indoor environments.

Deploying software updates induced a good amount of unease. With Mender, we can now confidently deploy OTA as security and reliability are central, not an afterthought.

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