Esper's cloud API drives automation and scale for Spire Health's remote patient monitoring

Spire grows global data-powered connected health technology on Esper

Leveraging Esper's cloud API for direct integration, Spire Health successfully scaled from pre-launch to 1000s of devices in the field.

- **Deployed 3500 Devices**
- **Built on Esper**
- **LTE Connection**
- **Custom Automations**

Finding the right technology partner to launch a device-based, digitally-native healthcare business

Utilizing respiratory trackers, Spire Health provides patients with monitoring for chronic respiratory disease. The wear-at-home-trackers connect to mobile phones utilizing Bluetooth Low-Energy (BLE), which track biometric data and send patient status alerts to care providers much earlier than traditional monitoring.

The demand for remote patient monitoring jumped in response to the pandemic, just as Spire Health entered the market. For Spire, finding a partner who understood that at-home tracking for sick and elderly patients requires a simple setup was essential. To scale amidst a global shutdown, the Spire team needed to:

- Work remotely with a non-tech-savvy patient population and provide remote technical support.
- Overcome connectivity challenges between the BLE-based wearable sensor and mobile devices.
- Keep support costs low with a nascent in-house IT team.
- Utilize an LTE connection rather than relying on WiFi — in order to better serve the patient population.
- Track devices after Google removed the ability to fetch device serial numbers on Android 10.
- Maintain HIPAA compliance and meet healthcare security standards.

"With Esper, our remote patient monitoring service just works. Esper's seamless deployment ensures that even patients who are not as comfortable with technology can successfully use our service. Device set-up is simple, there is zero configuration needed by the patients, and Esper's full-service solution detects connectivity and sensor failures ahead of time and alerts the Spire team for proactive outreach to our patients, often before they even notice an issue.

- Neema Moravej, PhD
Co-founder and Chief Scientist, Spire Health

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Esper's Solution

Spire Health decided to move forward with Esper for our Android expertise, API-driven integrations, and seamless provisioning of devices. Spire continues to serve more patients on Esper with these solutions:

- **Cloud API:** Leveraging our Device SDK API, Spire's application can fetch device serial numbers. This solution avoided otherwise necessary and extensive work to Spire's cloud code.
- **Automation:** Spire built unique workflows using Esper's API and Device SDK such as an automatic troubleshooting workflow involving toggling in and out of airplane mode and factory resetting.
- **Device recognition:** Custom SDK provides API privileges, allowing Spire to utilize automated triggers for Mobile Data and WiFi connectivity including exposure to the reboot API, the serial number field, and automated reactions for connectivity issues.
- **Six-tap provisioning :** Spire Health's devices are enrolled with Esper and work for patients out of the box.
- **Uptime:** Esper's custom deployments ensure application updates do not cause device downtime.
- **Telemetry:** Esper's telemetry allows Spire to closely monitor and react to fluctuations in data usage based on real-time information.
- **Robust security:** Esper's PCI audit proves that Esper's platform is not exposed to patient data and Esper's staff undergoes HIPPA business associate training.
- **Future-proof** — Esper is agile and can flexibly fit the changing needs of growing healthcare organizations.