



Case study

Enabled a Leading Medical Device Manufacturer to Deliver Superior Digital Experience Across Medical Devices and Apps

48,000+

Company Size

60%

Cost Savings

70%

Test Efficiency Gain

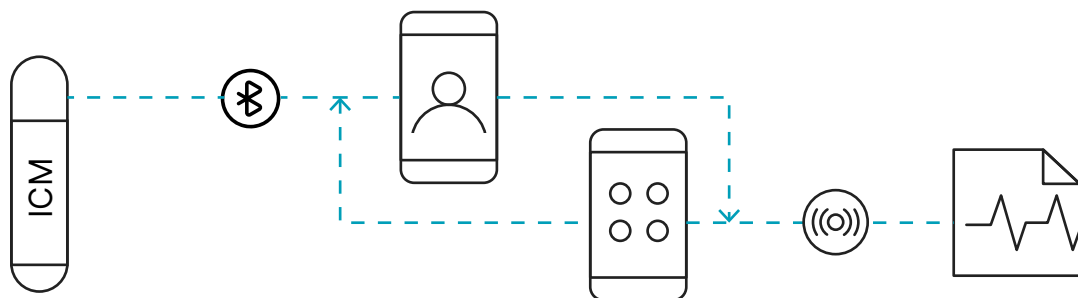
Introduction

In the high-stakes world of medical device manufacturing, precision and reliability are not just priorities—they are imperatives. A leading medical device company, renowned for its innovative solutions, encountered a significant challenge with their Insertable Cardiac Monitor (ICM) devices and the associated Clinic Assistant and Patient Apps. These devices play a crucial role in long-term cardiac monitoring by tracking a patient's heart's electrical activity, detecting irregular heart rhythms (arrhythmias), and transmitting this data seamlessly to healthcare providers or the patients themselves via mobile applications.

Problem Statement

The primary challenge was ensuring the performance and connectivity of the ICM devices with the Clinic Assistant and Patient Apps. The apps needed to reliably connect to the ICM device within a 6-foot (2-meter) range via Bluetooth Low Energy, transmitting device data and displaying real-time monitoring status. Achieving this required rigorous testing across a wide array of mobile platforms to ensure compatibility with the diverse range of mobile phone models and operating systems used by their extensive user base.

Figure 1



Maintaining an in-house physical mobile device lab for such extensive testing proved to be prohibitively expensive, difficult to manage, and lacked the necessary scalability. The client needed a cloud-based device lab that could efficiently and effectively address these issues while maintaining the security and privacy of sensitive patient data. Additionally, they wanted the solution to handle a high volume of tests and include features for automating testing processes to minimize manual effort.

Solution

The client sought the expertise of Pcloudy, a cloud-based app testing platform, to overcome their challenges. The collaboration began with an in-depth understanding of the specific needs and obstacles faced by the client. Pcloudy then tailored a comprehensive solution to address these requirements effectively.

Private Cloud Device Lab: Pcloudy provided a Private Cloud Device Lab, offering 24/7 access to a wide range of mobile devices and operating systems exclusively for the client. This extensive device lab ensured thorough testing across all potential user scenarios, guaranteeing compatibility with the diverse mobile phones and operating systems used by their patient base. The inclusion of Bluetooth Low Energy (BLE) connectivity allowed for accurate and reliable testing of the communication between ICM devices and mobile apps.

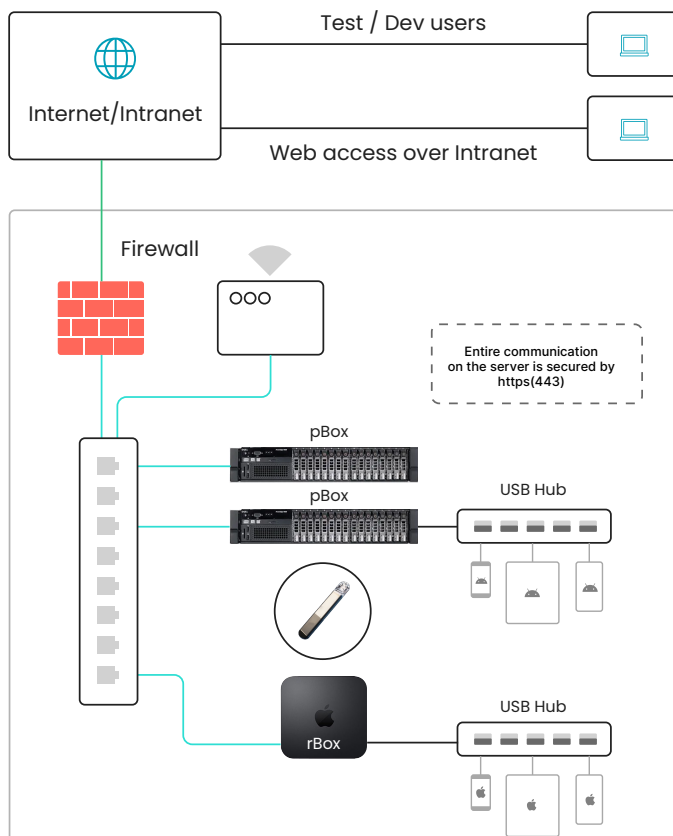


Figure 2

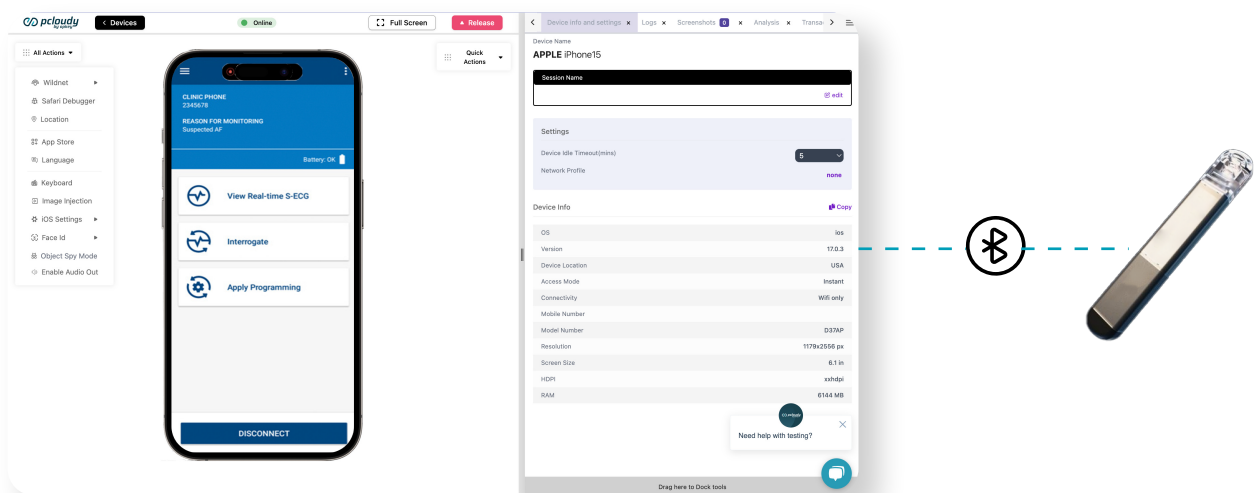
Architecture of Private Cloud – Mobile Device Lab Offered to the Client

Compliance and Security: Understanding the sensitivity of patient data, Pcloudy offered a Private Cloud Device Lab, compliant with AICPA SOC2, GXP, ISO 27001, CSA, GDPR, and HIPAA standards. This ensured the security and privacy of patient data throughout the testing process, addressing a critical concern for the client.



Automation: Pcloudy's integration with the client's existing automation framework enabled the automation of repetitive test cases, significantly reducing manual efforts and increasing test coverage. The platform's capability to run parallel tests accelerated the testing process, ensuring faster delivery of high-quality app updates.

Remote Testing and Collaboration: Pcloudy's cloud-based platform allowed engineers to perform remote testing, access real-time data, and collaborate seamlessly from different locations. This flexibility ensured that the testing process could be conducted under real-world conditions, enhancing the reliability of the results.



Detailed Insights and Quick Resolution: Pcloudy provided detailed insights into test results, enabling quick identification and resolution of issues. This feature was crucial in maintaining the high standards of performance and reliability expected from the client's ICM devices and associated apps.

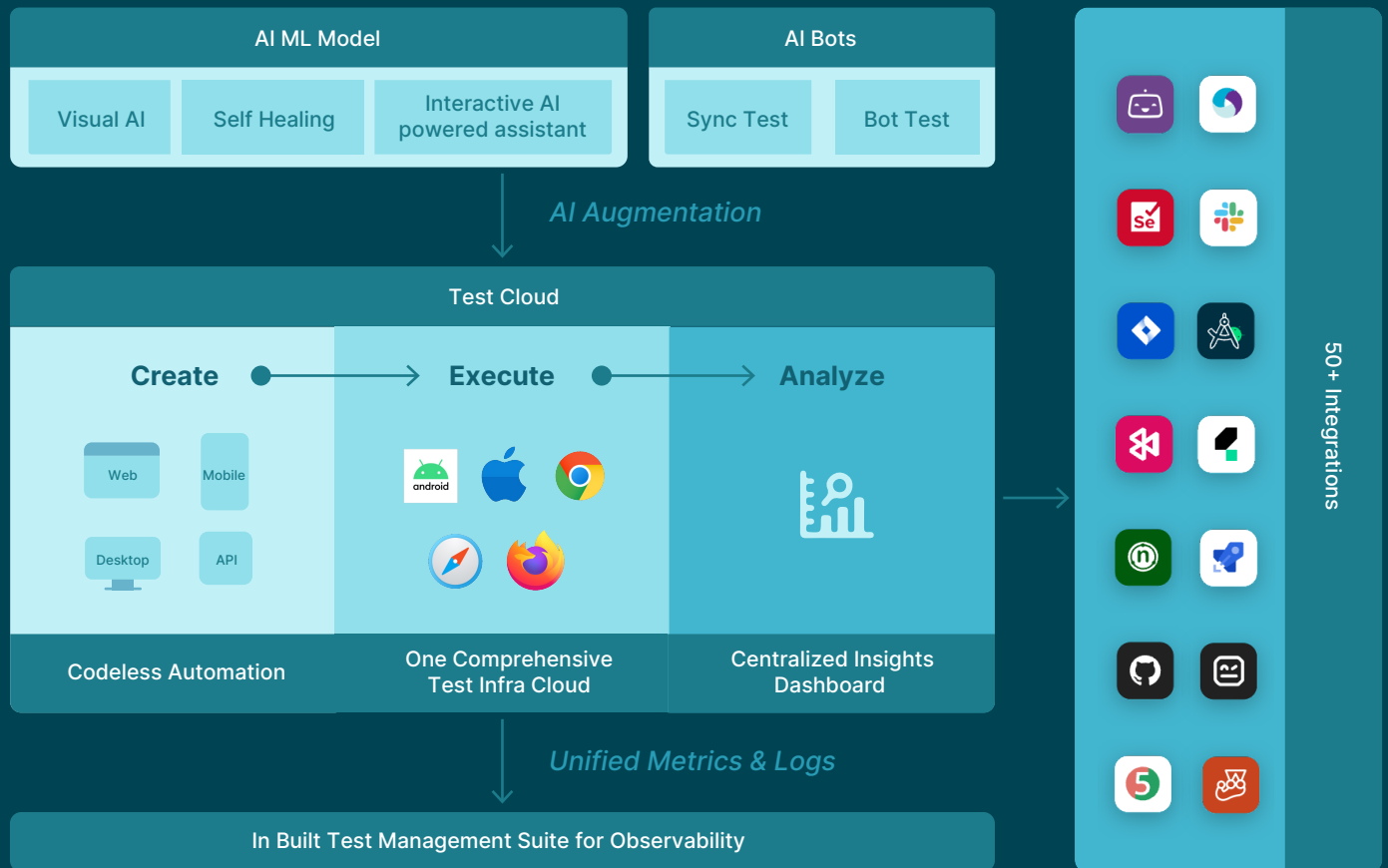
Results

The collaboration with Pcloudy led to remarkable improvements in the client's app testing processes. Transitioning from a physical test infrastructure to a cloud-based test infrastructure resulted in cost savings of 60%, eliminating the expenses associated with sourcing and maintaining physical devices. Automation and parallel testing capabilities reduced the overall testing time by 70%, significantly accelerating the release cycle for app updates. The access to a wide range of devices ensured comprehensive test coverage, allowing the identification of potential issues before they could impact end-users.

Furthermore, the remote access and real-time test reporting features of Pcloudy enhanced collaboration among the client teams, leading to quicker decision-making and issue resolution. The rigorous and thorough testing process ensured the optimal performance of the ICM devices, increasing the confidence of both clinicians and patients in the reliability of these critical medical devices. This collaboration not only improved the efficiency and effectiveness of the testing process but also reinforced the company's reputation for delivering high-quality, dependable medical solutions.

Release Digital Apps Faster with Pcloudy's AI Augmented Unified Testing Suite

AI Augmented Unified App Testing Approach



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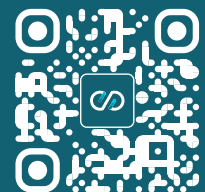
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