7Factor Customer Case Study: HandyTrac

MySQL → Aurora MySQL

Challenge

For 26 years, HandyTrac has helped multifamily housing managers control and monitor entry into 5 million units at 10,000 properties. They invested early in custom software, developed in-house by Tibor Szenti, a brilliant electrical engineer who co-invented and holds patents for much of the company's core technology. The original network of keypads communicated with an in-house server via dialup communications.

For more than 20 years, Szenti personally maintained the monolithic code as the company leveraged advances in hardware and networking technology to enhance their services. With no framework or refactoring for cloud-based best practices, serial extensions made the system ever more complex and less stable. This raised security concerns and slowed the pace of innovation. Company leaders also started to worry about having all their code dependent on one individual. "What if Szenti wins the lottery?"

Solution

7Factor rebuilt HandyTrac's app and web portal from scratch, using modern frameworks and best practices, including a major modernization to an API-based system built on AWS. The front end is built on Vue.js, and the back end is written in Java with an Aurora MySQL database managed by RDS.

Much of the early rebuild work reduced the time needed to deploy updates and provision resources, using Concourse for continuous integration/continuous delivery and Terraform to provision AWS infrastructure as code. The rebuild also updated existing communications functions into an online portal that displays all key control-related transactions using best practices of modern UI design. The new system also implements custom, automated email alerts that can be sent to property managers and residents.

Results & Benefits

7Factor engineers are quick to acknowledge that the new solution is far from revolutionary. Its value lies in modernizing a hand-crafted, in-house system that worked but was expensive to extend and maintain. Rebuilding the software on AWS with modern tools, design, and best practices makes HandyTrac services much more efficient, secure, stable, and extensible.

The new system also implements value-rich features, which include: A clean, modern, easy-to-use design, which translates into a better user experience in the web portal. Improved workflow, which helped HandyTrac admins and property owners spend less time and effort accomplishing routine tasks. And modern infrastructure design, which enables continuous system improvements and reduces the risk of breaking the system whenever developers add new features to the system. It all adds up to a system better positioned to support HandyTrac's continued innovation and success.