

Bigleaf Networks

case study

Revitalizing UI and testing framework

Bigleaf Networks provides innovative wired and wireless network optimization and monitoring solutions, ensuring seamless cloud connectivity. They focus on delivering high-quality, reliable internet performance to businesses, helping them maintain stable connections and improve application experience—even for those less familiar with complex networking concepts.

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 bigleaf
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Challenge



Bigleaf sought to overhaul its UI to compete with industry leaders, improve user experience, and streamline development. However, it faced challenges with outdated design elements and challenging timelines. Its CI/CD infrastructure also needed an audit to support long-term performance enhancements and cost savings. Critical goals are ensuring seamless migration from legacy tools and improving test coverage.



Services we provided

UI design

1

Frontend development

2

Backend development

3

DevOps services

4

Test automation

5



Results & benefits

Accelerated delivery:
Completed planned epics a month early (**8% faster than the initial plan**)



Improved UI consistency:
Standardized design system adoption (**>90% reusable components**)



Reduced maintenance costs:
Enhanced test reliability and coverage (**~99.9% typical use cases covered**)



Future-ready infrastructure:
Clear migration path to the modern toolset and distributed architecture



Client's testimonial



Working with CodiLime felt like an extension of our own team. They quickly understood our goals and guided us in modernizing our UX. Their engineers integrated seamlessly and delivered a new UI ahead of schedule (8% faster). This collaboration also brought a standardized design system (>90% reusable components), improved test coverage (~99.9% coverage), and a clear migration path to a future-ready distributed architecture. We were impressed by their clear communication and flexibility when facing new challenges.

David Kubarycz
VP of Engineering - Bigleaf Networks



The scope of the project



To address the modernization, our team started by conducting a comprehensive frontend audit, evaluating their design system, their technology stack, and existing solutions. We determined that reusing or refreshing the existing components was impractical and opted for a reliable, off-the-shelf design system.



The scope of the project



UI modernization

Design system selection

To modernize the UI, we selected a design system that accommodates future scalability while aligning with the project's immediate goals. This approach provided a solid foundation for both the design and development teams to create and deliver a more cohesive user experience.

Standardized UI components

By implementing a flexible design system, we established a consistent visual language, enabling faster UI updates and easier maintenance.



The scope of the project



Infrastructure and CI/CD enhancements

Bigleaf needed infrastructure improvements to support scalable growth. Our team audited their architecture and CI/CD pipelines, identifying bottlenecks and outdated tools.

Strategic migration plan

Our senior engineers collaborated with Bigleaf to design a detailed roadmap that addressed performance, maintenance, and cost efficiency.



The scope of the project



Test automation and QA improvements

To upgrade testing efficiency and reliability, we conducted a test automation audit and made targeted improvements.

Streamlined test codebase

Using best practices such as the Page Object Model, fixtures, and data-driven testing, we reduced maintenance effort for new features.

Expanded test coverage

We introduced robust regression test plans, extended test suites, and shifted testing earlier in the release pipeline to align with Bigleaf's schedules.



The scope of the project



Backend integration and team scaling

Our team integrated with Bigleaf's backend developers to accelerate progress and introduce new efficiencies.

Key contributions:

- Optimized internal test frameworks and improved Postgres SQL query performance.
- Explored new technologies like Graphite for time-series data visualization.
- Supported faster delivery of enhancements through close collaboration with Bigleaf's team.



Technologies and tools



TypeScript



django



About CodiLime

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Since 2011, CodiLime has been the engineering partner of choice for semiconductor companies, networking services, telecom services, and software solution providers.

We have come a long way – from a startup to a company that hires more than 250 top-notch software developers, network engineers, DevOps experts, and solution architects. **We focus on five N.E.E.D.S. - Networks, Equipment, Environment, Data and Security.**

We aim to link engineering talent with business domain expertise. Everything to provide our clients with delivery excellence and custom-tailored solutions.

Check out what our partners have said about us and how they evaluated our cooperation.

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