



CASE STUDY

Leading Telecom Company
Solves Performance Issues
With Service Virtualization

OVERVIEW

One of the largest broadband connectivity and cable operators in the United States serves over 32 million customers in 41 states with its primary offerings that include internet, cable television, and mobile and voice services, delivered through its advanced fiber optic network.

With millions of residential and business customers depending on the company's internet solution for robust connectivity, entertainment, and voice services, this prominent player in the telecommunications industry engages in performance testing for its myriad of applications.

To pull this off, the company partnered with Parasoft to address performance testing challenges using service virtualization, which resulted in significant improvements across their applications.

Industry:
Telecommunications

Company Size:
100,000+

Location:
United States

Solution:
Virtualize, CTP

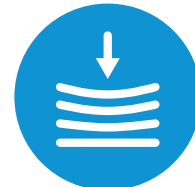
KEY RESULTS



Saved tens of thousands per year by preventing test data costs.



20% increase in test coverage of mobile apps.



Replicated 40+ services through virtualization to enhance test resilience.

THE CHALLENGE

The telecommunications company faced multiple software development and testing challenges. Some of the critical issues were:

- » Inability to efficiently conduct performance tests on the mobile network due to integration with third-party services that did not scale to capacity and contributed to high testing costs.
- » Challenges with internal web services and limited availability of the lab environment for the mobile network's proactive service alerts application.
- » Working with complex and sensitive test data, like Social Security numbers, credit cards, names, phones, and email, made performance testing in a live environment extremely complex, necessitating the need for a virtual substitute.
- » Syncing data across all components of the test environment to support end-to-end test scenarios.

THE APPROACH

To address these challenges, the business turned to Parasoft to implement service virtualization, which simulates the behavior of third-party APIs like Experian and ID Analytics.

Teams used virtual proxies to record and play back test data from live services. They could also control the flow of traffic by toggling between live and virtual.

The company used Parasoft's leading CRUD tools to dynamically, store, read, and update data to support realistic end-to-end test scenarios. By leveraging virtual endpoints and data, the teams can focus their testing efforts on internally developed mobile components.

THE SOLUTION

The company implemented service virtualization using [Parasoft Virtualize](#) for functional and nonfunctional testing.

Parasoft Virtualize enabled the teams to create virtual data and services. They leveraged Parasoft CTP to capture key response metrics and hit statistics. By identifying and remediating performance bottlenecks in application code, the team overcame scalability challenges of proactive service alerts. They also replaced third-party and internal systems at a fraction of the cost.

“By leveraging Parasoft Virtualize, we were able to build virtual services with hybrid response modes, combining virtual and real services based on matching conditions. This flexibility enabled us to test complex and sensitive scenarios, such as specific credit scores or past debts, to ensure our transactions met the Service Level Agreements (SLAs).”

—Senior director of IT, BA/Testing/Release at the telecommunications company



THE RESULTS

Parasoft enabled the company to meet its overarching goal of delivering high-quality software to its customers. Adopting Parasoft Virtualize resulted in numerous benefits for the company, including:

- » **Increased test coverage.** Service virtualization enabled the company to expand its test coverage by over 20% in mobile applications. Parasoft Virtualize provided flexibility to create diverse test scenarios and helped the team meet internal code coverage requirements.
- » **Prevented test data costs.** With Parasoft Virtualize, the company is saving tens of thousands of dollars annually by avoiding direct testing against expensive third-party applications.
- » **Reduced costs.** The company saved an additional \$7,600 annually by adopting virtual services for test data setup, eliminating the need to buy and maintain additional real devices and lab spaces.
- » **Resilient testing.** The company replicated over 40 complex services through virtualization, which enabled testing continuity even when real services were unavailable.
- » **Improved performance testing efficiency.** Parasoft Virtualize allowed the company to test complex data scenarios, simulate natural disaster scenarios, and overcome scaling limitations of third-party systems for performance testing.

“We’ve been able to replicate over 40 services by setting up virtualized versions instead of hitting the real service, which gives us the ability to continue testing even when that service is unavailable.”

—Senior director of IT, BA/Testing/Release at the telecommunications company

TAKE THE NEXT STEP

[Try the free edition of Parasoft Virtualize](#) to accelerate your software testing with virtual data and environments.

ABOUT PARASOFT

Parasoft helps organizations continuously deliver high-quality software with its AI-powered software testing platform and automated test solutions. Supporting the embedded, enterprise, and IoT markets, Parasoft's proven technologies reduce the time, effort, and cost of delivering secure, reliable, and compliant software by integrating everything from deep code analysis and unit testing to web UI and API testing, plus service virtualization and complete code coverage, into the delivery pipeline. Bringing all this together, Parasoft's award-winning reporting and analytics dashboard provides a centralized view of quality, enabling organizations to deliver with confidence and succeed in today's most strategic ecosystems and development initiatives—security, safety-critical, Agile, DevOps, and continuous testing.