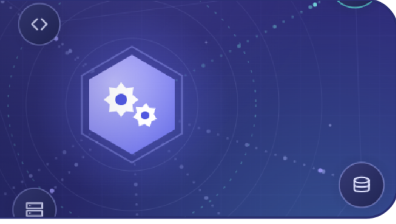


## Complete Business Logic Testing Across 3,500 APIs in Days, Not 147,000 Manual Hours



How AppSentinels and a global systems integrator delivered automated discovery and complete business-logic testing for a Fortune 500 enterprise, compressing an effort that would have taken a manual team roughly 70 person-years into a matter of days.

### EXECUTIVE SUMMARY

A global systems integrator, partnering with AppSentinels, engaged to run an API security assessment for a Fortune 500 workforce-solutions enterprise operating across dozens of markets. The scope was 3,500 APIs. Tested by hand to a business-logic standard, that estate would have taken roughly 42 hours per API — about 147,000 hours, or more than 70 person-years of effort that no engagement could realistically absorb. AppSentinels automated discovery and stateful business logic testing across all 3,500 APIs, delivering the complete assessment in days, with deeper coverage than manual testing could reach. The result: a measurably stronger security posture for the enterprise, and a fast, repeatable, profitable delivery model for the integrator.

## The Challenge: Why Manual API Testing Doesn't Scale

Three realities made a manual assessment of this estate impractical, and each one is where API security testing typically breaks down.

### 01 Every API has to be invoked by hand

Before a single security test runs, each API must be discovered, authenticated, sequenced, and exercised manually. At roughly 42 hours per API across 3,500 APIs, that is about 147,000 hours of work, more than 70 years for a single engineer, and still years for a sizable team.

### 02 The business logic lives in people, not the spec

Effective testing depends on knowing which object belongs to whom and which role may do what. That context rarely exists in documentation, and few testers carry it for every workflow. Without it, manual testing confirms that an API works, not that it cannot be abused.

### 03 The flaws that matter hide in sequences manual testing can't reach

Business logic abuse, such as broken object and function level authorization, privilege-escalation chains, and entitlement bypass, lives in multi-step workflows, exactly the paths single-endpoint manual testing is least able to exercise at this scale.

“Testing these many APIs to a true business-logic standard simply wasn't feasible by hand. AppSentinels let us deliver a complete assessment in days, with depth our team could not have reached manually, and turned it into something we can repeat for every client.”



— Engagement Lead, Global Systems Integrator



## The Solution

AppSentinels and the systems integrator ran the assessment together: the platform automated the work that made a manual approach infeasible, and the integrator's team drove findings, prioritization, and remediation. Discovery and testing were unified on the **Business Logic Graph**, a live model of every API, identity, object, and access path, so behavior was evaluated against ownership and intent, not just request validity.



### Automated Discovery

Inventoried and mapped all 3,500 APIs and their relationships into the Business Logic Graph, eliminating the manual discovery and invocation burden that consumed most of the 42 hours per API.



### Stateful Business Logic Red-Teaming

Generated and executed authorization, ownership, and multi-step sequence tests across every API, encoding the business-logic knowledge manual testers would otherwise have to learn one workflow at a time.



### A Force Multiplier for the SI

Freed the integrator's team from per-API invocation to focus on interpreting findings, ranking risk, and guiding fixes, the high-value work clients actually pay for.



### A Repeatable Assessment Model

The same automated workflow re-runs on demand, turning a one-off heroic effort into a standard, scalable service line the integrator can offer every client.

**3,500**

APIs automatically discovered and tested

**147,000**

hours of manual effort avoided (~70 person-years)

**100%**

of APIs tested for business logic abuse, not sampled



## Business Outcomes

- ✔ **A measurably stronger posture for the enterprise**  
Business logic flaws that endpoint testing misses, such as broken object and function level authorization, privilege-escalation chains, and abusable sequences, were surfaced across the full estate, not a sample.
- ✔ **Testing that no longer depends on tribal knowledge**  
The platform encodes the ownership and access rules testers would otherwise learn API by API, so coverage no longer hinges on who happens to understand each workflow.
- ✔ **A delivery model that finally scales for the SI**  
What manual testing made economically impossible, a complete assessment of 3,500 APIs, became a days-long, repeatable engagement, turning a capacity-bound effort into a service the integrator can run profitably and at scale.
- ✔ **Days to value instead of years**  
The assessment delivered in days what a manual team would have spent roughly 70 person-years to attempt, and produced deeper coverage in the process.

### About AppSentinels

AppSentinels is the Business Logic Security platform for modern applications. Built around the Business Logic Graph, it delivers continuous discovery, automated stateful red-teaming, and runtime protection across AI agents, MCP servers, APIs, and the workflows that connect them. First-generation API security tools inventoried endpoints; AppSentinels secures the logic behind them, the layer where breaches happen.