Rakuten SixthSense

2025
API Security Guide
Protect, Detect, Prevent

How to Secure APIs Against the Next Wave
of Cyber Threats

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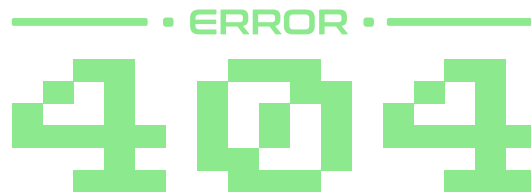*Get the full interactive demo on API security in action*

Why This Guide Matters

90% of web traffic is API-driven, but 83% of breaches involve API vulnerabilities.

✅ **APIs power the modern internet - security gaps mean business risk.**

✅ **Threat actors are evolving. Is your API security strategy keeping up?**

✅ **This guide arms you with 2025-ready insights, trends, and solutions.**
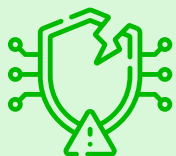
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The 2025 API Threat Landscape

Data-Driven Insights:

41%
Increase in API-based attacks in 2024.

45%
of enterprises admit they lack visibility into API security.

Top API Risks

Broken authentication, data exposure, injection attacks, and AI-generated threats.

Are your APIs at risk? Let's dive in. ⟩

API Breaches That Shook 2024

Major API Breaches and What We Learned

T Mobile™

API Breach - 37M records leaked.
Cause? API misconfigurations.

twitter

API Breach - Exposed 200M user emails.
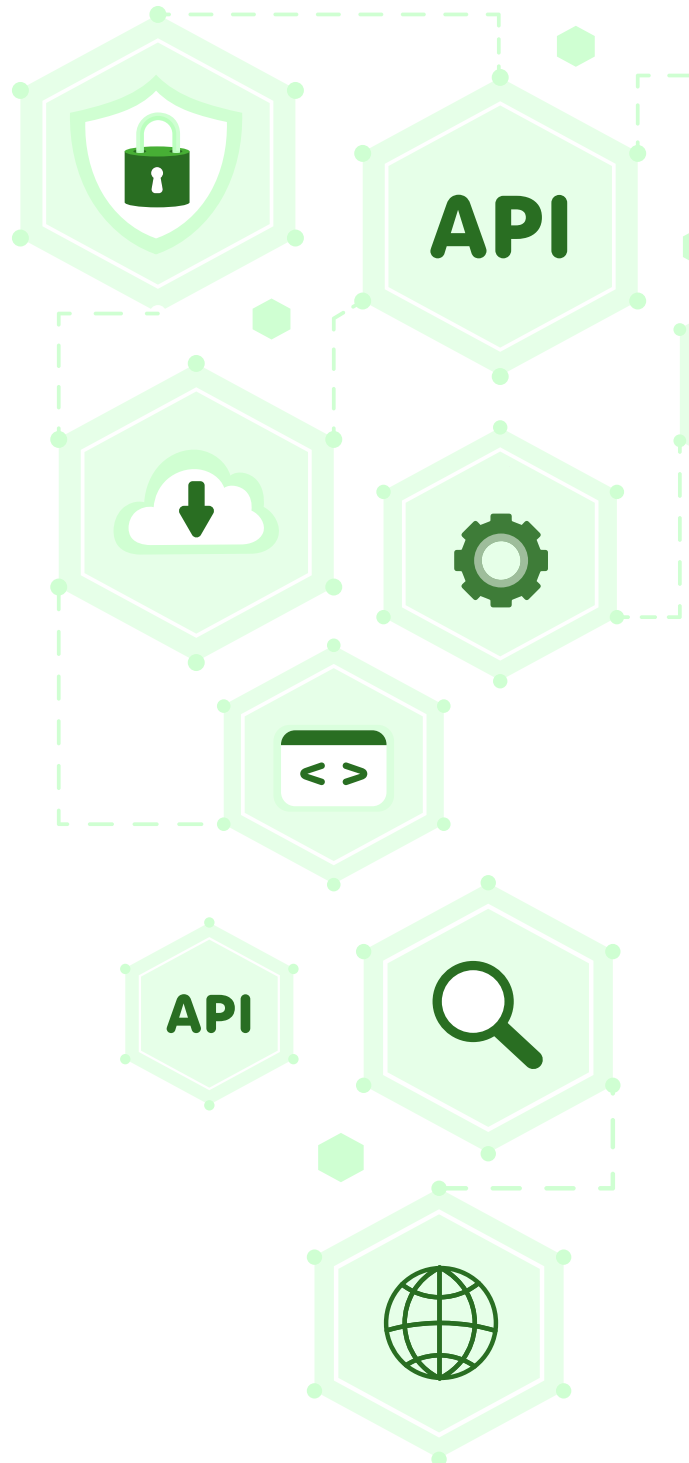**Cause?** Rate-limiting failure.

MoveIt

API Breach -
Thousands of businesses affected.
Cause? Zero-day API vulnerability.

Takeaway:

If giants can fall, no API is
immune. **Proactive monitoring
is key.**

Are your APIs at risk? Let's dive in.

The API Security Framework 2025

A 5-Step Model for Bulletproof API Security:

✅ **Discovery**

Identify shadow APIs and undocumented endpoints.

✅ **Authentication**

Enforce strict access control with OAuth2, JWT, and mTLS.

✅ **Monitoring & Observability**

Real-time threat detection with AI-driven insights.

✅ **Rate Limiting & Throttling**

Prevent abuse and bot-driven attacks.

✅ **Encryption & Compliance**

Align with OWASP API Top 10 and industry standards.

How does your API security stack up?

API Security in the Age of AI & Automation

AI is Powering API Attacks and Defenses

- ✅ **Rise of AI-generated attack scripts targeting API vulnerabilities.**

- ✅ **Automated API security solutions reduce false positives and response time.**

- ✅ **AI-powered anomaly detection prevents zero-day exploits.**

API Security Compliance Must-Haves for 2025

Regulations & Standards You Can't Ignore

- ✅ **GDPR, CCPA, PCI-DSS, and HIPAA – updated API security mandates.**

- ✅ **OWASP API Security Top 10 (2024 update).**

- ✅ **API Security Certification: Why enterprises are adopting ISO 27001 & SOC2.**

API Observability -
The Security Game Changer

Why Traditional API Security is Failing & Observability is the Answer

Real-time monitoring →
Detect API anomalies instantly.

End-to-End API traffic analysis →
No more blind spots.

Automated threat response →
Faster mitigation of API attacks.

Zero Trust for APIs -
The 2025 Model

Shift from Perimeter Security to Zero Trust API Architecture

✅ **Verify every API request, every time.**

✅ **Least privilege access**
No over-permissioned API keys.

✅ **Continuous authentication**
Prevent stolen tokens from being misused.

API Security Testing -
How to Harden Your APIs

Best Practices for API Security Testing

✅ **Fuzz Testing**
Find unexpected vulnerabilities.

✅ **Penetration Testing**
Simulate real-world attacks.

✅ **Runtime API Security Scanning**
Catch threats before they hit production.

✅ **Automated API Testing**
Reduce manual security overhead.
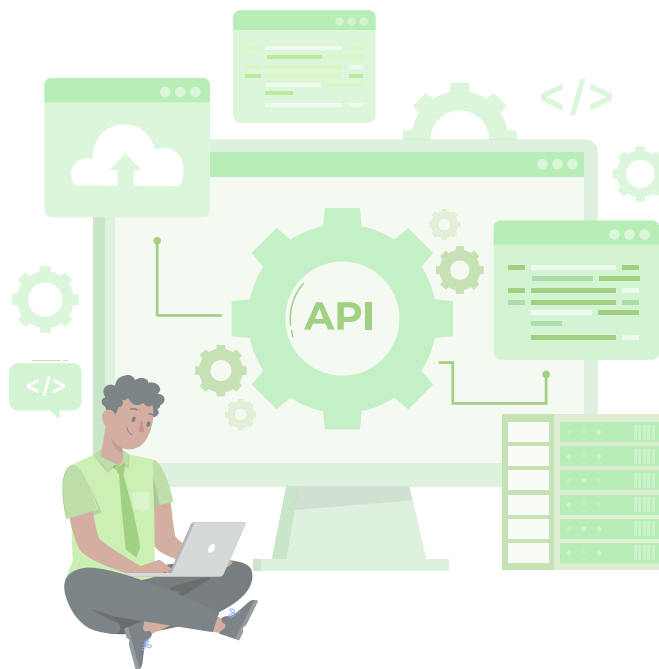
The Cost of API Downtime & Breaches

What's at Stake?

$400K
Average cost of an API-related breach.

38%
lose trust in a brand after a data leak.

API downtime
can cost enterprises **$300K per hour.**

2025 API Security Playbook - What You Need to Do Now

Your 2025 API Security To-Do List:

- ✅ **Implement API Observability for 360° visibility.**

- ✅ **Enforce Zero Trust policies on API authentication.**

- ✅ **Automate API security testing & monitoring.**

- ✅ **Align with the OWASP API Security Top 10.**

- ✅ **Invest in AI-driven API security solutions.**

2025 API Security Guide: Protect, Detect, Prevent

How Rakuten SixthSense API Security Helps

Why Enterprises Trust Rakuten SixthSense API Observability

- ✅ **Real-time API attack detection & response.**

- ✅ **Zero Trust API enforcement for bulletproof security.**

- ✅ **AI-powered API behavior analytics.**
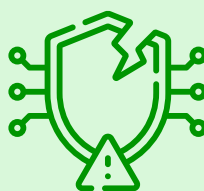
- ✅ **End-to-End API traffic monitoring for full visibility.**

Success Story -
API Security in Action

How Rakuten SixthSense Stopped a Major API Breach →

Industry
FinTech

Threat
OAuth token abuse attack

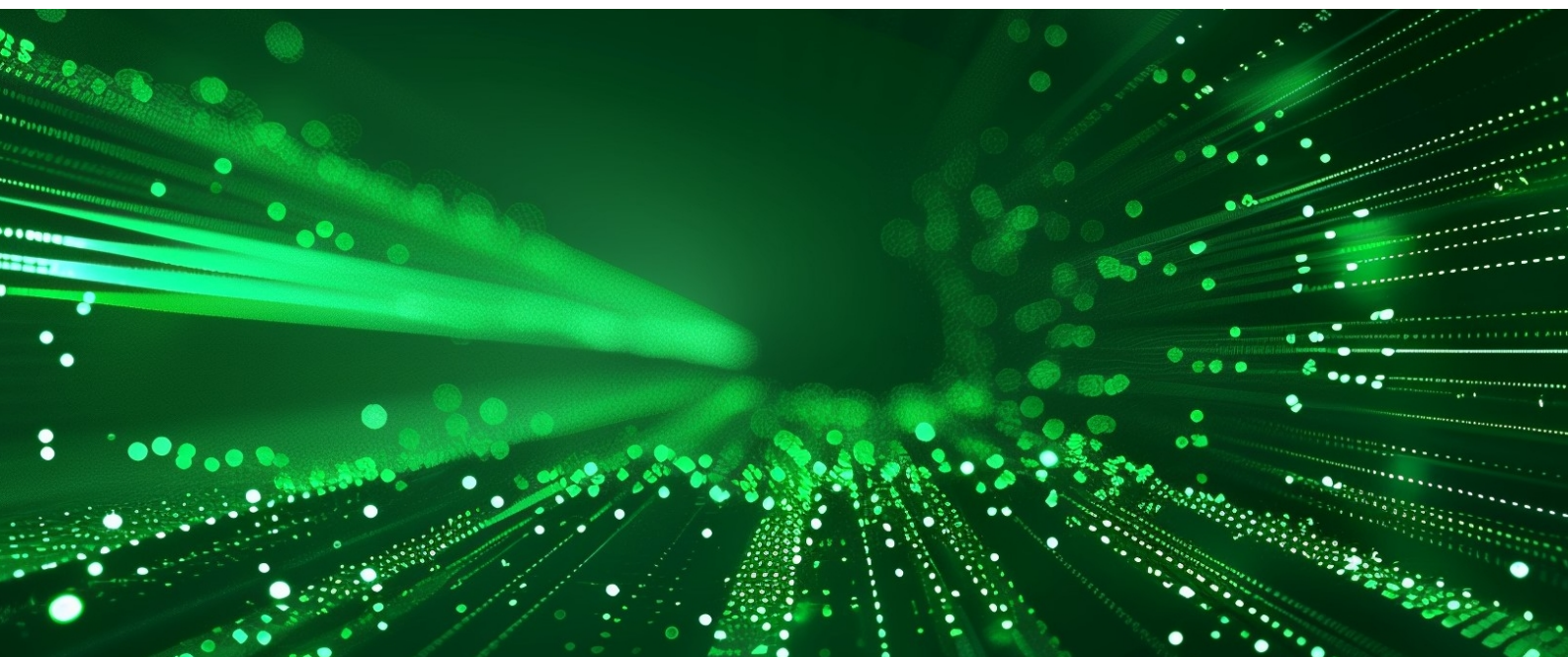### Solution
AI-driven anomaly detection flagged unauthorized API activity.

Impact
Blocked attack within seconds, prevented loss.

See how we can secure your APIs too

Get Ahead of API Threats

Secure Your APIs Before Attackers Exploit Them

Next Steps:

- ✓ **Book a Free API Security Audit**

- ✓ **Try Our Interactive API Security Demo**

Secure Your APIs Now

Ready to Secure Your APIs for 2025?

Schedule a Demo with Rakuten SixthSense and experience API Security Observability in action.

Powered by Rakuten SixthSense.
Stay ahead of threats. Gain full API visibility. Prevent breaches before they happen.