NetSPI™

API Penetration Testing vs. Web Application Penetration Testing

API Penetration Testing and Web Application Penetration Testing are closely related but distinct areas of application pentesting. The main difference is that API Penetration Testing focuses on the backend communication and data transfer of applications, while Web Application Penetration Testing focuses on an internet-facing client browser experience.

Testing APIs can and should be part of Web Application Penetration Testing, but the scope of the test will be limited to specific API calls used by the workflows of that application. Conversely, an API Penetration Test should test all documented (and possibly undocumented) calls within the API specification or catalog. For this reason, it's important to prioritize API Penetration Testing separately from Web Application Penetration Testing to ensure comprehensive testing of API(s).

	API Penetration Testing	Web Application Penetration Testing
Testing Focus	API	Application
Manual Testing	✓	✓
Automated Scanning	✓	✓
Catalog or Sample File	✓	
API Architecture (REST, SOAP, GraphQL, etc.)	✓	
Authentication/Authorization Testing	✓	✓
Business Logic Testing	✓	✓
User Interface Vulnerabilities		✓
Dependency Vulnerabilities		✓
Resource Consumption Vulnerabilities	✓	
Inventory Management Vulnerabilities	✓	

About NetSPI

NetSPI® pioneered Penetration Testing as a Service (PTaaS) and leads the industry in modern pentesting. Combining world-class security professionals with AI and automation, NetSPI delivers clarity, speed, and scale across 50+ pentest types, attack surface management, and vulnerability prioritization. The NetSPI platform streamlines workflows and accelerates remediation, enabling our experts to focus on deep dive testing that uncovers vulnerabilities others miss. Trusted by the top 10 U.S. banks and Fortune 500 companies worldwide, NetSPI has been driving security innovation since 2001. NetSPI is headquartered in Minneapolis, MN, and available on **AWS Marketplace**. Follow us on **LinkedIn** and **X**.

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