



# Accelerate Innovation with Automated Security

Enforce Open Source Policies with the Nexus Platform

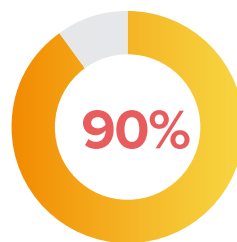
# It's no secret... developers use open source software.

Still, there are questions around how it should be managed—and for good reason. Here's why:

- Open source components are not created equal. Some are vulnerable from the start, while others go bad over time.
- Usage has become more complex. With tens of billions of downloads, it's increasingly difficult to manage libraries and direct dependencies.
- Transitive dependencies: if you are using dependency management tools like Maven (Java), Bower (JavaScript), Bundler (Ruby), etc., then you are automatically pulling in third party dependencies—a liability that you can't afford.

**How do you manage open source risk at scale?**

**Through an automated open source governance policy.**



**90%**  
of the components in  
most modern applications  
are open source.

**1.4 trillion**  
download requests of Java,  
npm, PyPi, and RubyGems  
were recorded in 2019.

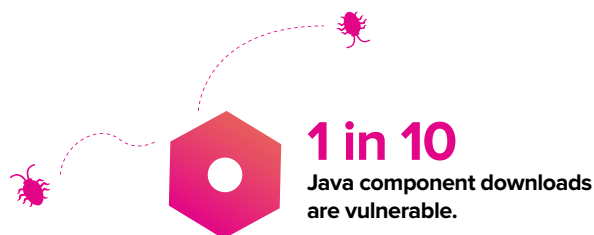


**379,000+**  
Java components are  
downloaded annually by  
the average company.

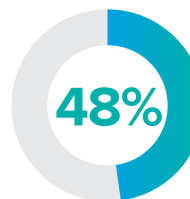
## DevSecOps: Why is open source policy critical?

As the number of breaches continue to rise, DevOps organizations are making investments to better protect themselves by doing more than just building stronger castle walls. These organizations are taking steps to integrate and automate security across the development lifecycle to build quality into their software.

According to the 2019 DevSecOps Community Survey:



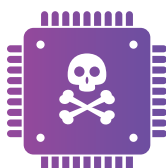
**1 in 10**  
Java component downloads  
are vulnerable.



**48%**  
of organizations have no  
open source governance  
policy or ignore it.



There has been a  
**71% increase**  
in open source related breaches  
over the past five years.



**1 in 5**  
organizations experienced  
at least one open source  
breach in the last 12 months.

# Accelerate DevSecOps early, everywhere, at scale with the Nexus Platform.



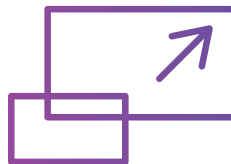
## Early

Nexus delivers intelligence within existing developer workflows and vetted components can be automatically quarantined based on policy.



## Everywhere

Nexus accelerates DevOps by integrating with the most widely used tools at every stage of the development pipeline.



## At Scale

Automate security in a DevOps pipeline with precise component intelligence.

“Integrating security into DevOps **to deliver ‘DevSecOps’** requires **changing mindsets, processes and technology.** Security and risk management leaders must adhere to the collaborative, agile nature of DevOps to be seamless and transparent in the development process, making the Sec in DevSecOps silent.”

**Gartner**

## But first, our data.

Our data quality is the lifeblood that powers our entire platform.

“The reason **we picked Lifecycle over the other products** is, while the other products were flagging stuff too, they were flagging things that were incorrect.”

— E. KWAN (FINANCIAL SERVICES), IT CENTRAL STATION REVIEW

### 97% of Nexus Intelligence is exclusive to Sonatype.

The bulk of our data is collected from verified online advisories and our in-house team of 65 security researchers. In fact, Sonatype’s team has uniquely discovered 1.4 million vulnerable component versions, providing more data than just what’s in the National Vulnerability Database.

### No false positives and no false negatives.

Through both automation and careful human curation, Nexus Intelligence is designed to give you results you can count on, saving you an average of \$14,000 in time per developer per year.

### When it comes to security, speed matters.

We implement a 12-hour fast track for critical and time-sensitive vulnerabilities. You’ll experience a **20% reduction in probability** of a breach when using the Nexus platform.

# Better together.

The Nexus Platform protects your entire software development lifecycle.



## nexus firewall

Vet parts early and automatically stop defective components from entering your DevOps pipeline.



## nexus lifecycle

Empower teams with precise component intelligence that enforces policy and continuously eliminates risk.



## nexus repository

Manage libraries and store parts in a universal repository and share them across the DevOps pipeline.



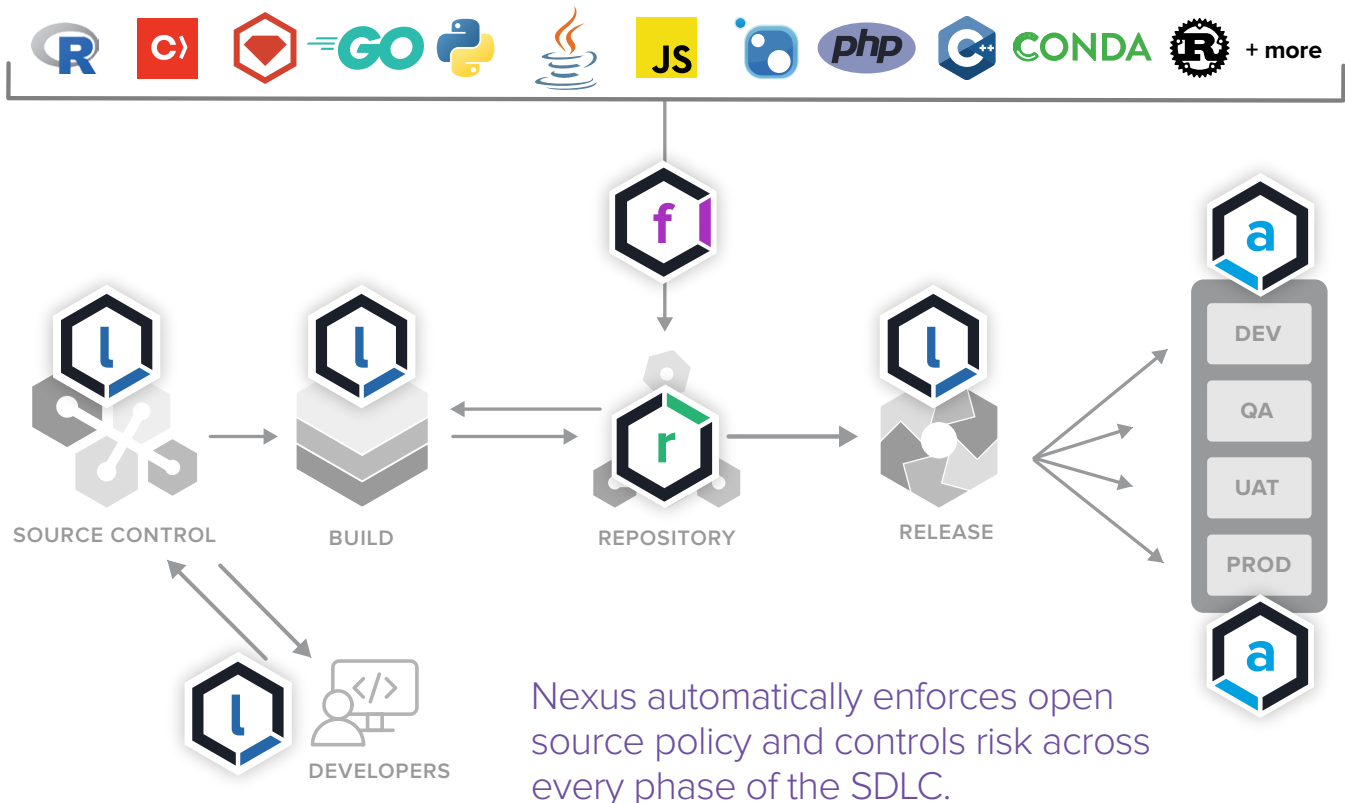
## nexus auditor

Examine OSS components within production apps.

"[Nexus] has helped developer productivity. **It's like working in the dark and all of a sudden you've got visibility.**

You can see exactly what you're using and you have suggestions so that, if you can't use something, you've got alternatives. That is huge."

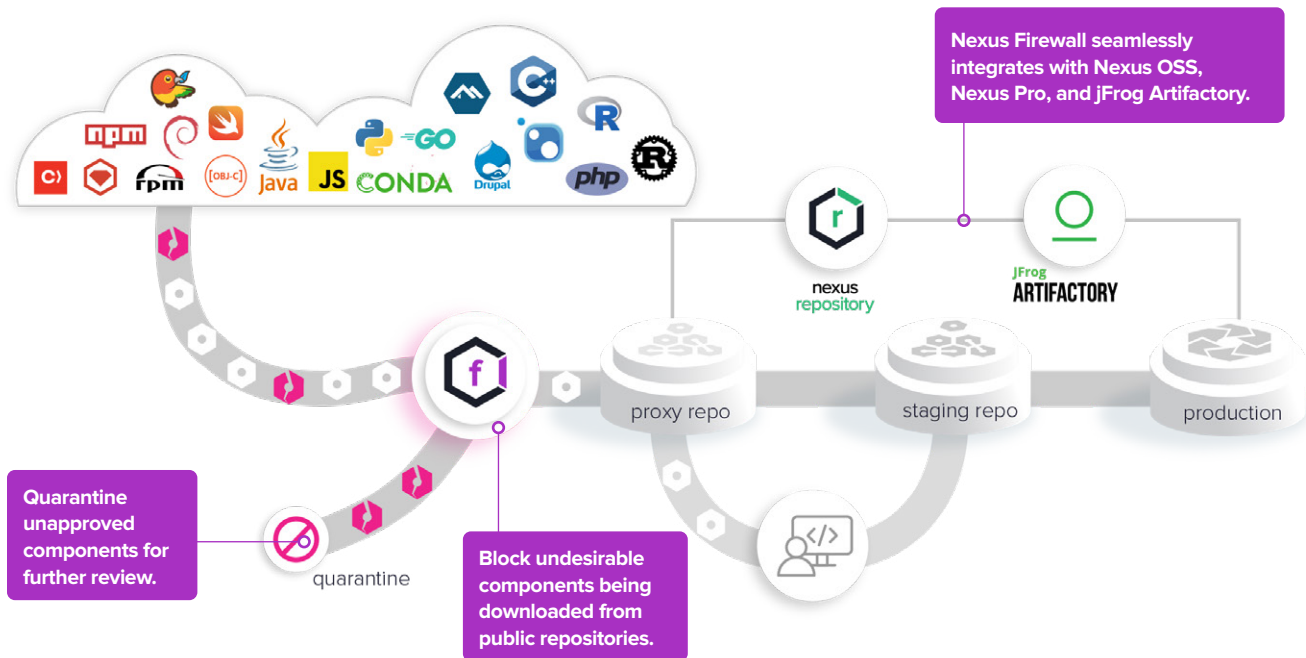
—C. CHANI (FINANCIAL SERVICES), IT CENTRAL STATION REVIEW





## THE EARLIER, THE BETTER

Block bad components at the door.



**Repository results for *maven-central***  
Oldest evaluation 10 months ago

**738** COMPONENTS IDENTIFIED  
100% OF ALL COMPONENTS ARE IDENTIFIED

**55** POLICY ALERTS  
AFFECTING 86 COMPONENTS

**29** **2** **49** QUARANTINED COMPONENTS

**FILTER:** All Exact Unknown **VIOLATIONS:** Summary All Quarantined Waived

Policy Threat	Component	Quarantined
Search Name	Search Coordinates	
	commons-collections : commons-collections : 3.2.1	

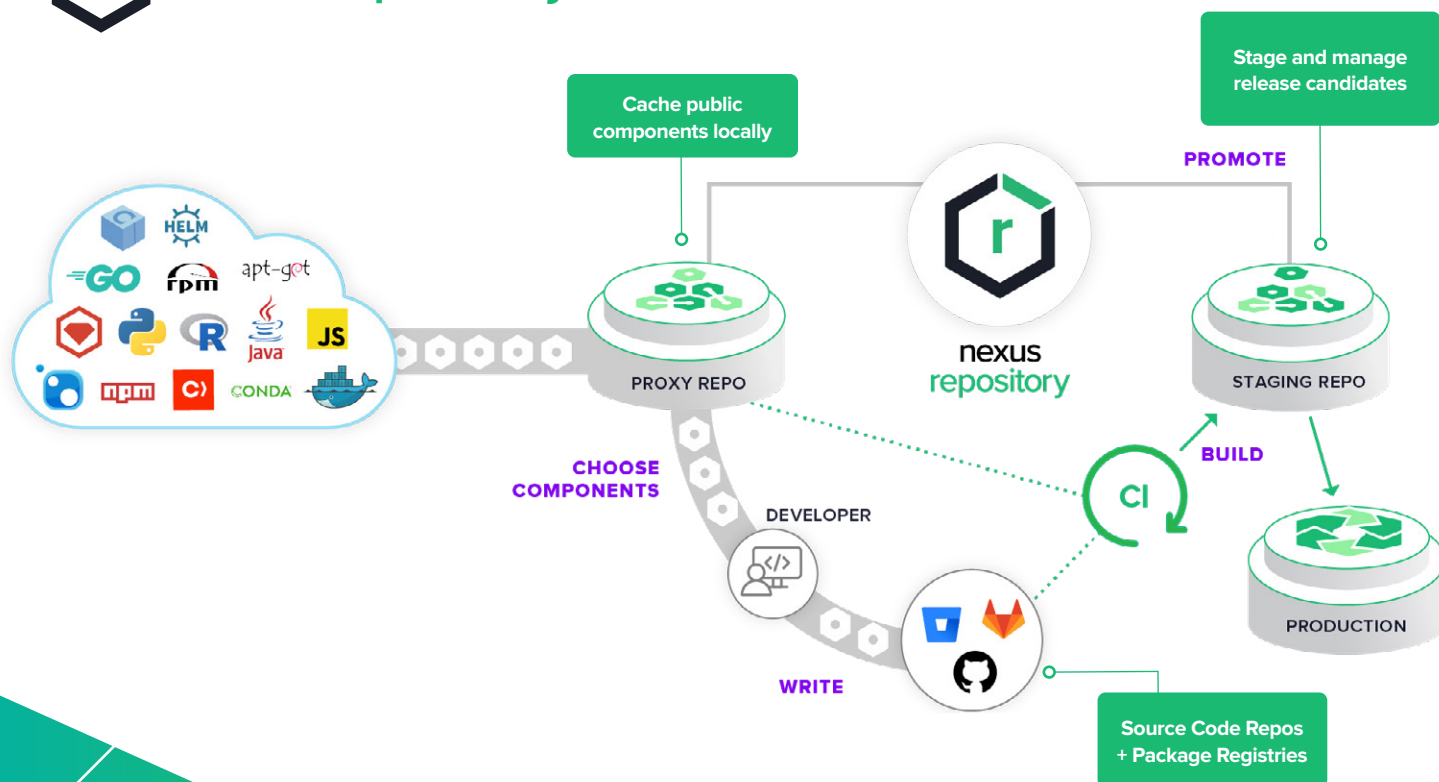
**Component Info** Policy Licenses Vulnerabilities Labels

View Existing Waivers

Policy/Action	Constraint Name	Conditions	Waivers
Security-High	High risk CVSS score	Found security vulnerability sonatype-2015-0002 with severity 9.0. Found security vulnerability sonatype-2015-0002 with severity 9.0. Found security vulnerability sonatype-2015-0002 with status 'Open', not 'Not Applicable'. not find label 'custom vuln'.	Waive

**Block, analyze, and selectively admit components.**

**Waive policy violations for component use when necessary.**

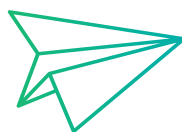


## A CENTRAL SOURCE OF CONTROL

Universally manage all of your components, binaries, and build artifacts.



Store and distribute all popular formats with Proxy, Hosted, and Group repositories for enterprise-ready flexibility.



Improve speed-to-market, reduce build times, and streamline developer productivity across the entire SDLC.



Scale and deploy enterprise reliability in multi-site, highly available configurations on premises or in the cloud.

“Nexus Repository Manager provides a central platform for storing build artifacts, saving us significant maintenance and hardware costs. I haven’t had any negative impact, so **I am very confident using Nexus in terms of its reliability.**”

— HAGEN RAHN, SR.  
SOFTWARE ENGINEER,  
SYSTEMA, IT CENTRAL  
STATION REVIEW

## PREVENTION IS BETTER THAN A CURE

# Maintain a trusted repository with Repository Health Check.



Repository Health Check (RHC) provides up-to-date component intelligence, so your teams make informed decisions early on.



Learn how many OSS components are in your repositories and the severity of any existing vulnerabilities.



Understand your open source risk exposure at a glance with known security issues.

“It ensures our developers are utilizing safe, open-source components. Through the use of Nexus software, we know when they were downloaded and where they’re being used. **It has helped us increase the security of our applications.**”

— A. EVANS (GOVERNMENT),  
IT CENTRAL STATION REVIEW

The screenshot displays the Sonatype Nexus Repository Manager interface. The top navigation bar includes the Sonatype logo, version information (PRO 3.22.0-02), and a search bar containing 'struts2-core'. The left sidebar shows a 'Browse' section with a list of repositories: Welcome, Search, Apt, Bower, Custom, Docker, Maven, NuGet, PyPI, R, Raw, RubyGems, npm, and an 'Upload' button. The main content area shows the search results for 'struts2-core' under the 'org/apache/struts/struts2-core/2.5.10/struts2-core-2.5.10.jar' path. The 'Component IQ' tab is selected, displaying a 'Version Graph' and a 'Selected Version' section. The 'Version Graph' shows a bar chart of popularity and a table of policy threats (Security, License, Quality, Other) for different versions. The 'Selected Version' section provides detailed information about the component, including its group, artifact, version, declared license, observed license, effective license, highest policy threat, highest CVSS score, hygiene rating, cataloged date, match state, identification source, and category. A 'View Details' button is located at the bottom of this section.

**Search and store open source and third-party components for all popular formats.**

**Check the health of your open source components with up-to-date security, license, and quality information.**

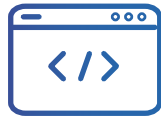




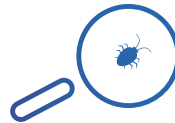
# Precise intelligence for healthier component choice early in development.



Choosing a safe component is as easy as using spell check.



Deliver component intelligence to developers in the tools they use every day like IDEs and source control.



Early detection and remediation prevents unplanned work, security breaches and maintainability issues.

“I would give this product a nine out of ten. I’ll have a full report of artifacts—including those that are not secure—that would have been ingested into our organization. **That information is priceless.**”

—C. CHANI (FINANCIAL SERVICES), IT CENTRAL STATION REVIEW

The screenshot displays the Nexus Lifecycle IDE integration. The top panel shows 'Policy Violations' with a table of issues. The bottom panel shows 'License Analysis' and 'Security Issues'.

Policy	Constraint	Summary
Security-High	High risk CVSS score	Found security vulnerability sonatype-2015-0002 with severity 9.0.
		Found security vulnerability sonatype-2015-0002 with severity 9.0.
		Found security vulnerability sonatype-2015-0002 with status 'Open', not 'Not Applicable'.
Architecture-Quality	Version is old	Age was 10 years, 9 months and 7 days

Threat Level	Declared License(s)	Observed License(s)
Liberal	Apache-2.0	Apache-2.0

Threat Level	Problem Code	Status	Summary
9	SONATYPE-2015-0002	Open	Arbitrary remote code execution with InvokerTransformer. Exploit Details: <a href="https://support.sonatype.com/hc/en-us/articles/214155137-Commons-collections-unintended-execution-in-deserialization-">https://support.sonatype.com/hc/en-us/articles/214155137-Commons-collections-unintended-execution-in-deserialization-</a>

Identify which components violate policy from within the IDE.

Select best component version based on real-time intelligence.

Migrate to approved version with one click remediation.





# Instantly access Nexus Intelligence data while searching for new packages.

- **Component details:** format, package, version
- **Security info:** Severity, source, threat category, reference details
- **Licensing data:** Declared and observed
- **Remediation advice:** Version history and recommended version

sonatype | The Central Repository

org.apache.struts:struts2-core:2.5.10

org.apache.struts:struts2-core: 2.5.10

org.apache.struts:struts2-core 2.5.10

Component Info Security Remediation Licensing

CVE-2017-5638 CVSS:10

Reference: CVE-2017-5638

Severity: 10

Source: cve

Threat: critical

Category: cve

uri: <http://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2017-5638>

CVE-2017-12611 CVSS:9.8

CVE-2018-11776 CVSS:8.1

CVE-2017-9804 CVSS:7.9

SONATYPE-2017-0173 CVSS:7.4

CVE-2017-7672

Remediation advice Upgrade to the new version: 2.5.17

Popularity

Policy Threat Details

Security License Quality Other

2.5.33

## Source Control Management

Highlights the specific lines of code that introduced a violation.

Shows the severity of the issue, along with the name, summary and description of the violation.

pom.xml

... @@ -16,6 +16,7 @@

16 16 <maven.compiler.source>1.8</maven.compiler.source>

17 17 <maven.compiler.target>1.8</maven.compiler.target>

18 18 <junit.version>4.12</junit.version>

19 + <jackson.version>2.9.9.3</jackson.version>

eduard-tita 4 minutes ago Author

Nexus IQ found policy violations introduced by:

10 com.fasterxml.jackson.core:jackson-databind:2.9.9.3

Bumping to version 2.10.0 will resolve these violations (as of May 07, 2020)

Threat (of 10)	Policy	Violation Details
10	Security-Critical	<b>Critical risk CVSS score:</b> <ul style="list-style-type: none"><li>Found security vulnerabilities: CVE-2019-14540, CVE-2019-14892, CVE-2019-14893, CVE-2019-16335, CVE-2019-17267</li></ul>
9	Security-High	<b>High risk CVSS score:</b> <ul style="list-style-type: none"><li>Found security vulnerability: sonatype-2019-0371</li></ul>

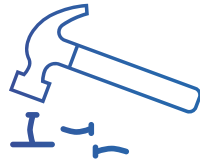
If a version is available that will fix the problem, the suggested remediation or upgrade path is also included.



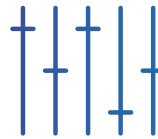
Analyze and enforce policies *automatically*.



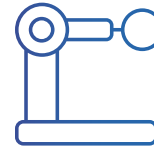
Ensure that policies are enforced as components are consumed across a variety of development tools.



Replace inefficient workflows and the burden of manual reviews.



Customize policies to meet specific compliance goals or mandates OR use our default policies to gain an immediate view of security, license, and quality risk.



Do it all with automation that supports agile and continuous goals!

“[Nexus Lifecycle] blocks undesirable open source components from entering our development lifecycle, based on the policies that we set. It will break the build straight away. There’s no way you can ship code that introduces new vulnerabilities. We just don’t allow it at all.”

— E. KWAN (FINANCIAL SERVICES), IT CENTRAL STATION REVIEW

Easily create custom policies across the software lifecycle.

Set organization-wide policy on which violations can be dismissed and which cannot.

Choose the applications or types to which the policy should be applied.

Define precisely when the policy applies and what actions should take place.

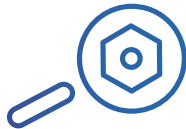
ACTION	PROXY	DEVELOP	BUILD	STAGE	RELEASE	OPERATE
No Action	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Warn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## Verify policy compliance by knowing what components are used and where.



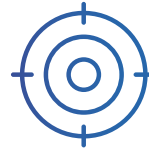
In just minutes, create an accurate software bill of materials for each application.



Identify specific components and their dependencies.



Gain access to name, license, age, popularity, known security vulnerabilities, and other metadata.



Know the exact location of any component — no more searching to see if you are impacted by a new vulnerability.

**“We’re no longer building blindly with vulnerable components.** We have awareness, we’re pushing that awareness to developers, and we feel we have a better idea of what the threat landscape looks like. Things that we weren’t even aware were vulnerabilities, we can now remediate really quickly.”

— D. DUFFY (FINANCIAL SERVICES), IT CENTRAL STATION REVIEW

**View the violations against various policy types.**

**Color codes identify critical (red), severe (orange) and moderate (yellow) risk levels. Severity criteria is configurable based on policy settings.**

**Developers view the threat that a violation has against an organization-wide policy.**

**Identify the component group, and the specific component and version used in any application.**

**Welcome to the Policy-Centric Application Report Preview**

This is the preview of the new Policy-Centric Application Report. Documentation can be found [here](#). We'd love to hear what you think of this new report, if you have any comments you can [submit them here](#).

**Appfuse Build Report**  
2019-03-11

5 12 3 20 VIOLATIONS Affecting 10 components 53 COMPONENTS 96% of all components identified 0 GRANDFATHERED violations

THREAT	POLICY	COMPONENT
9	Security-High	commons-fileupload : commons-fileupload : 1.3
9	Security-High	org.springframework : spring-web : 3.0.5.RELEASE
9	Security-High	taglibs : standard : 1.1.2
7	Security-Medium	org.springframework : spring-context : 3.0.5.RELEASE
7	Security-Medium	org.springframework : spring-core : 3.0.5.RELEASE
7	Security-Medium	org.springframework : spring-webmvc : 3.0.5.RELEASE
7	Security-Medium	org.springframework.security : spring-security-core : 3.1.2.RELEASE
0	None	commons-collections : commons-collections : 3.1
0	None	javax.servlet : jstl : 1.2

Waived ✓

Waived ✓

**“My advice is ‘do it yesterday.’ You save yourself a lot of money.** Even during one, two, or three weeks, it’s going to cost you a lot of money to fix the security vulnerabilities that you are ingesting in your development lifecycle. You could be avoiding that by using a product like Lifecycle.”

— C. CHANI (FINANCIAL SERVICES), IT CENTRAL STATION REVIEW



## Get visibility and transparency for quick remediation.



One dashboard easily filtered to support development, operations, security, and compliance.



Prioritize remediation and development work based on detailed intelligence.



Track progress and trends for defects opened, fixed, waived, and discovered.



Reduce your technical debt and ease the maintenance burden.

Easy to understand description written for developers by developers.

In-depth research includes detailed detection and remediation guidance.

Find the best/fastest remediation path by linking to the component that brought in any transitive dependencies.



“There is a feature called Continuous Monitoring. Because of this feature, as time goes on we’ll be able to know whether a platform is still secure or not. **It’s integrated, it’s proactive, it’s exactly what you want for a security product.**”

— C. CHANI (FINANCIAL SERVICES), IT CENTRAL STATION REVIEW

## Continuously monitor for new defects.



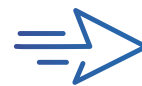
An automated early warning system to identify newly discovered defects.



Detailed intelligence on vulnerabilities including precise root cause and component dependencies.



Ongoing monitoring and alerts of new vulnerabilities based on component, risk level, or applications affected.



Improve incident response times with precise identification of components and apps to be remediated.

View a list of all components that have policy violations in a particular stage. Identify which apps include those components.

Identify the total risk of each component as well as a breakdown by severity to determine which components should be remediated first.

Easily search for components based on application stage and policy types.

Which apps include those components.											
Filter			Manage		Results						View
<div>Organizations14</div> <div>Applications51</div> <div>Application Categories13</div> <div>Stages1 of 4</div> <div> <input type="checkbox"/> all stages <input type="checkbox"/> Build <input type="checkbox"/> Stage Release <input type="checkbox"/> Release <input checked="" type="checkbox"/> Operate </div> <div>Policy Types1 of 4</div> <div> <input type="checkbox"/> all policy types <input checked="" type="checkbox"/> Security <input type="checkbox"/> License <input type="checkbox"/> Quality <input type="checkbox"/> Other </div> <div>Violation State1 of 2</div> <div>Severity Level2 - 10</div> <div>RevertClear</div>			<div>VIOLATIONS</div> <div>COMPONENTS</div> <div>APPLICATIONS</div>		NAME	AFFECTED APPS	TOTAL RISK	CRITICAL	SEVERE	MODERATE	LOW
			commons-httpclient : commons-httpclient : 3.1	11	200	81	113	6	0		
			org.apache.struts : struts2-assembly : zip : all : 2.3.14	4	150	96	48	6	0		
			org.apache.struts : struts2-blank : war : 2.3.14	4	130	76	48	6	0		
			org.apache.struts : struts2-showcase : war : 2.3.14	4	130	76	48	6	0		
			org.apache.struts : struts2-portlet : war : 2.3.14	4	130	76	48	6	0		
			org.apache.struts : struts2-rest-showcase : war : 2.3.14	4	130	76	48	6	0		
			axis : axis : 1.2	6	126	54	72	0	0		
			org.apache.struts : struts2-mailreader : war : 2.3.14	4	125	76	43	6	0		
			commons-collections : commons-collections : 3.1	10	122	98	24	0	0		
			org.apache.struts : struts2-core : 2.3.14	4	122	76	43	3	0		
			commons-collections : commons-collections : 3.2.1	9	99	81	18	0	0		
			org.apache.struts.xwork : xwork-core : 2.3.14	4	99	66	33	0	0		
			org.springframework : spring-context : 2.5.6.SEC03	6	94	36	58	0	0		
			org.apache.httpcomponents : httpclient : 4.2.5	6	94	36	58	0	0		
			org.springframework : spring-web : 2.5.6.SEC03	6	94	36	52	6	0		
			org.apache.jackrabbit : jackrabbit-webdav : 2.5.2	6	87	36	51	0	0		





## Identify and fix container vulnerabilities.



View open source risk at all layers (runtime, operating system, and application levels).



Precise and accurate identification and detailed remediation guidance for application-level vulnerabilities.



Single view into all open source risk with native Lifecycle dashboards and reports.

“Nexus has improved the time it takes us to release secure apps to market by saving us weeks of rework.”

— SR. LEAD SOLUTION SERVICES (FINANCIAL SERVICES), IT CENTRAL STATION REVIEW

Red Hat Clair ▶



Integration to Red Hat Clair or other container scanning solutions for complete vuln management.

One flexible policy engine to govern OSS risk in the entire container.

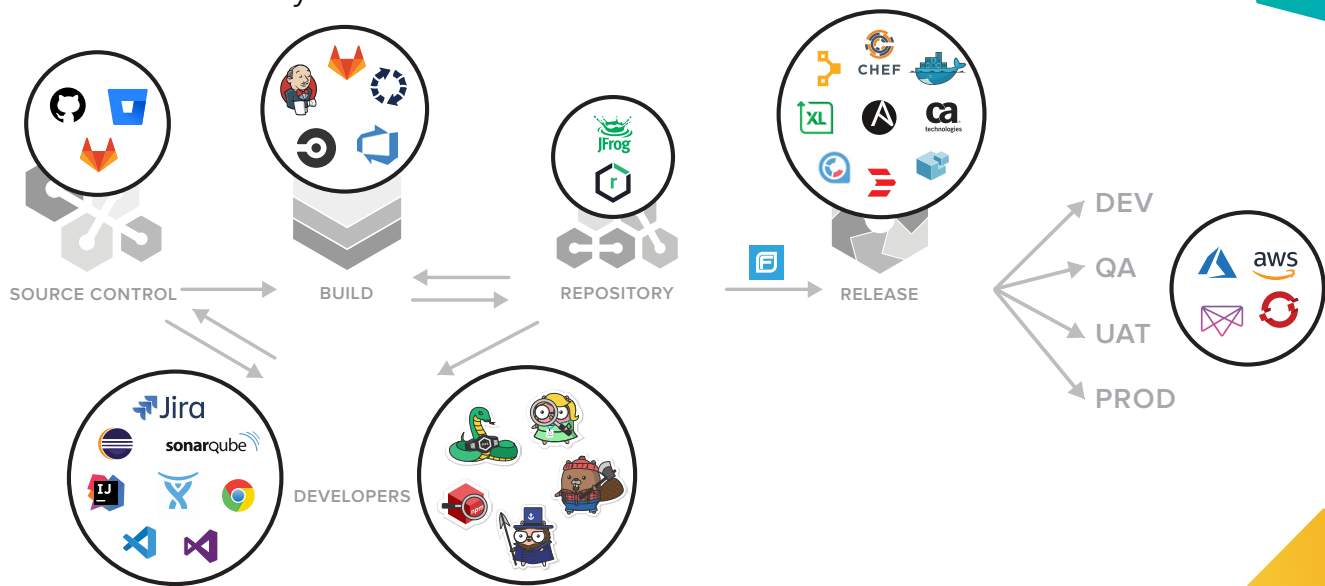
Scan base OS packages for vulnerabilities.

◀ Sonatype Ahab



# Integrations? You better believe it.

We work where you work.



## Better or the best? You decide.

Test drive the power of Nexus Intelligence in five minutes.

Run a free Nexus Vulnerability Scan to learn about vulnerabilities in an app (yours or one of ours). **Try it free at [www.sonatype.com/appscan](https://www.sonatype.com/appscan).**

**[sonatype.com/get-nexus](https://sonatype.com/get-nexus)**

**GET STARTED TODAY!**



Sonatype is the leader in software supply chain automation technology with more than 300 employees, over 1,000 enterprise customers, and is trusted by over 10 million software developers. Sonatype's Nexus platform enables DevOps teams and developers to automatically integrate security at every stage of the modern development pipeline by combining in-depth component intelligence with real-time remediation guidance.

For more information, please visit [Sonatype.com](https://Sonatype.com), or connect with us on [Facebook](#), [Twitter](#), or [LinkedIn](#).

### Headquarters

8161 Maple Lawn Blvd.  
Suite 250  
Fulton, MD 20759  
United States  
1.877.866.2836

### Virginia Office

8281 Greensboro Dr.  
Suite 630  
McLean, VA 22102

### European Office

168 Shoreditch  
High St., 5th Floor  
London E1 6JE  
United Kingdom

### APAC Office

5 Martin Place  
Level 14  
Sydney 2000, NSW  
Australia

### Sonatype Inc.

[www.sonatype.com](https://www.sonatype.com)  
Sonatype Copyright 2020  
All Rights Reserved.