

Getting Started with Kiuwan

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What's Kiuwan

Kiuwan is a cloud-based solution platform for **Application Security** and **Enterprise Software Analytics**.



From the **Security** point of view, Kiuwan enforces a rigorous approach in the **detection of Security Vulnerabilities**.

We strive to meet the most stringent requirements and our compliance reports meet all well known *security market standards*:

- **OWASP, CWE, MISRA, NIST, PCI, and CERT, among others.**

Please visit [FAQs - Security Standards supported by Kiuwan](#) for further info

Kiuwan offers not only functionality focusing on **Security**, but also a suite of features that allows you to build a *Software Analytics* collaborative environment customized for the needs of your company, your development teams and your providers



How Kiuwan can help me

Companies of different sizes, maturities and industries need to develop software to support their business. Some companies develop their software themselves and some use external providers to help them develop and maintain their business applications. There are companies that just have a few applications and others that have hundreds or even thousands. Some rely in 1 or 2 technologies and languages only and others that have been adapting their technology stack over time and use several different languages and technologies.

No matter the case, all have the same **needs** with different levels of complexity:

- **Early detection of Security Vulnerabilities**, prior to deployment, and fix them as soon as possible
- **Reduction of issues** —bugs— of the technical requirements of the applications: performance, efficiency, etc.
- Proper **cost management** associated with development and maintenance, whether it's by themselves or external resources,
- Align developed applications with business goals and missions,
- Increase the **productivity** of the projects, or
- Gain greater control —**governance**— of their application development or maintenance outsourcing.

In most cases, these companies do not have the people and infrastructure needed to automate Security and Quality Assurance, Control and Certification Management for all developed software, or cannot afford hiring an "on site" continuous certification service for the development process.

i Kiuwan is the answer for all these companies. **Kiuwan can address all the above needs** regardless of the size and the level of complexity of the development processes.

Beyond these corporate needs, *Kiuwan is designed to meet the needs of **all the roles** involved in any company's Software Development Process*. Again, no matter the size, complexity or color of the company, *Kiuwan has the right information to the right stakeholder* in the IT department.

Find yourself below and see how Kiuwan can help you:

- **CIOs** (Chief Information Officers) who need to *make strategic decisions* to improve software development.
- **CSOs** (Chief Security Officers) who need to *tackle security* from the application perspective.
- **QA Managers and Engineers** who need to *control and monitor the quality* state of applications under development.
- **Project Managers**, who need to know *the health of the projects* they manage from a technical perspective.
- **Application Architects**, who can *discover structural flaws* early in the development process.
- **Operations** who need to know the *level of quality and security of the application* they have in production.
- **DevOps**, if companies are taking that *transformation* path Kiuwan is an essential tool for the people who make it happen.

- **Integration and Deployment Managers**, who need to make sure *the structural and technical health of the applications* they are moving in their respective pipelines is what is expected in the next environment.
- **Developers**, who want *to develop the best software possible* and learn as much as possible in the process.

Kiuwan SaaS platform

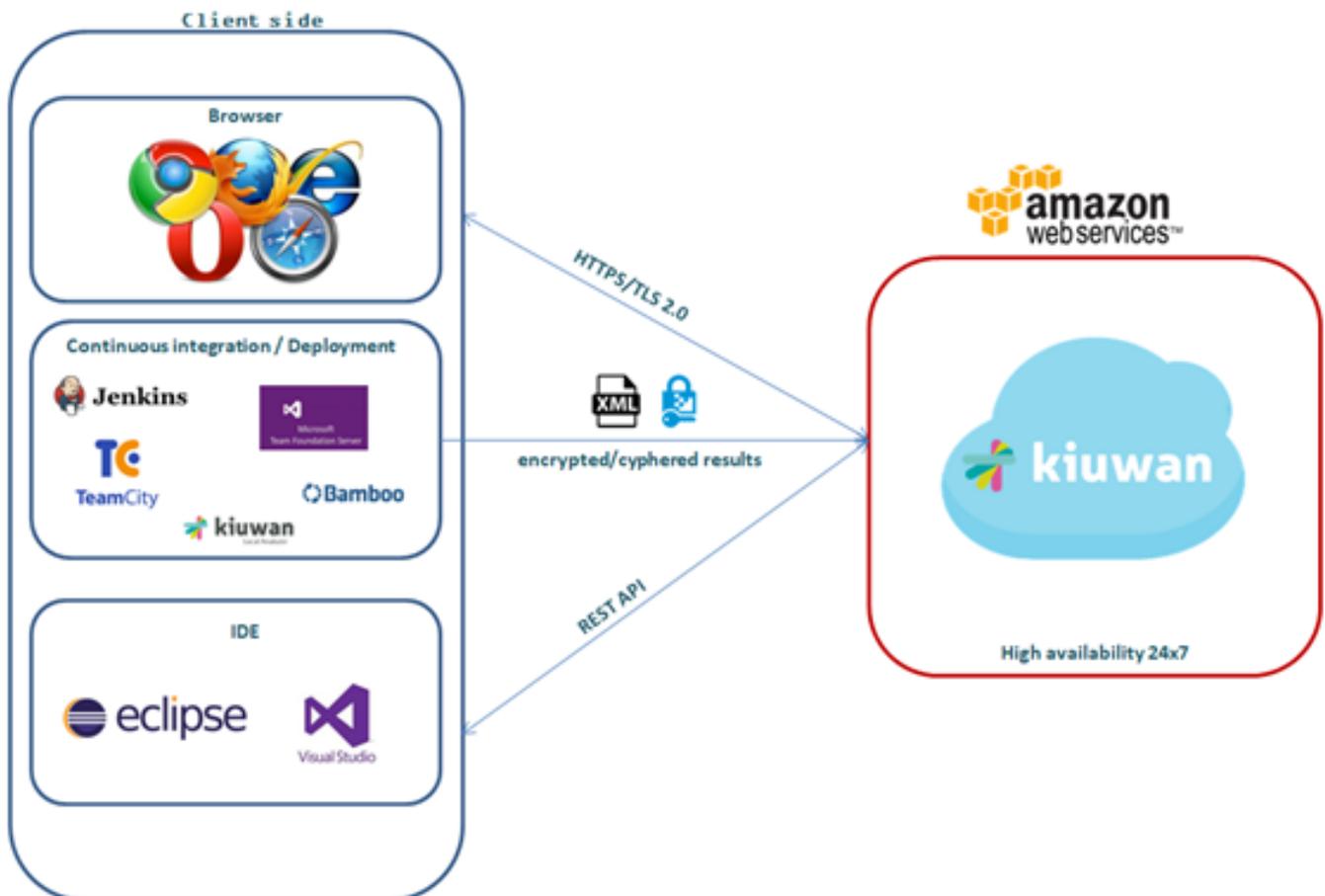
i Kiuwan is a **SaaS cloud platform**, 24x7 fault-tolerant infrastructure (AWS).

It is built on a **hybrid cloud architecture** and a **distributed analysis engine**, offering you the best of both approaches (*cloud and on-premise*).

There's no need to deploy any local infrastructure, Kiuwan can do the SAST software analysis for you. All you need to do is signup, and start using Kiuwan.

Nevertheless, you can leverage your own infrastructure and service. Kiuwan offers an **on-premise distributed analysis engine (KLA - Kiuwan Local Analyzer)** that you can freely instantiate as many times as you need, allowing your company to integrate and embed it into existing infrastructure.

This hybrid cloud architecture lets you fully integrate Kiuwan SAAS with client-side infrastructure and operations such as Continuous Integration, Deployment and Development systems, limiting all the communications between your side and Kiuwan to the analysis results and via the most advanced security protection mechanisms.



Local Analysis - Kiuwan Local Analyzer (KLA)

Whatever may be the reason (source code privacy, leverage existing computing resources or integrate analysis within you infrastructure), you may want to analyze locally.



Kiuwan Local Analyzer (KLA) is the *distributed analysis engine* that allows to you to **execute Kiuwan analyses locally**.

With Kiuwan Local Analyzer, you can perform analyses **without the source code leaving your premises**. It **analyzes the source code** and **uploads (encrypted and through HTTPS) the results** (containing the defects found, the number of the line containing the defects, and optionally, the source code of the lines found to be defective) to Kiuwan.

The KLA is adaptable to each organization's network settings, and can be easily configured to work with a **proxy server**, or an implemented **corporate authentication service**, such as **LDAP**.

With KLA:

- The source code never leaves your organization's systems, since analyses take place on your machines.
- Your installation will always be updated, because KLA is automatically updated from the Kiuwan cloud
- You will be able to integrate within your existing systems (IDE's , CI/CD pipelines, etc.)

Kiuwan Local Analyzer is a zipped module that you download and uncompress on the target machine. It runs on Windows, Unix/Linux and MacOS , and only requires JVM (8), 1 Gb of free memory, access to source code and internet connection. It can be executed from Graphical User Interface or by Command-Line Interface.

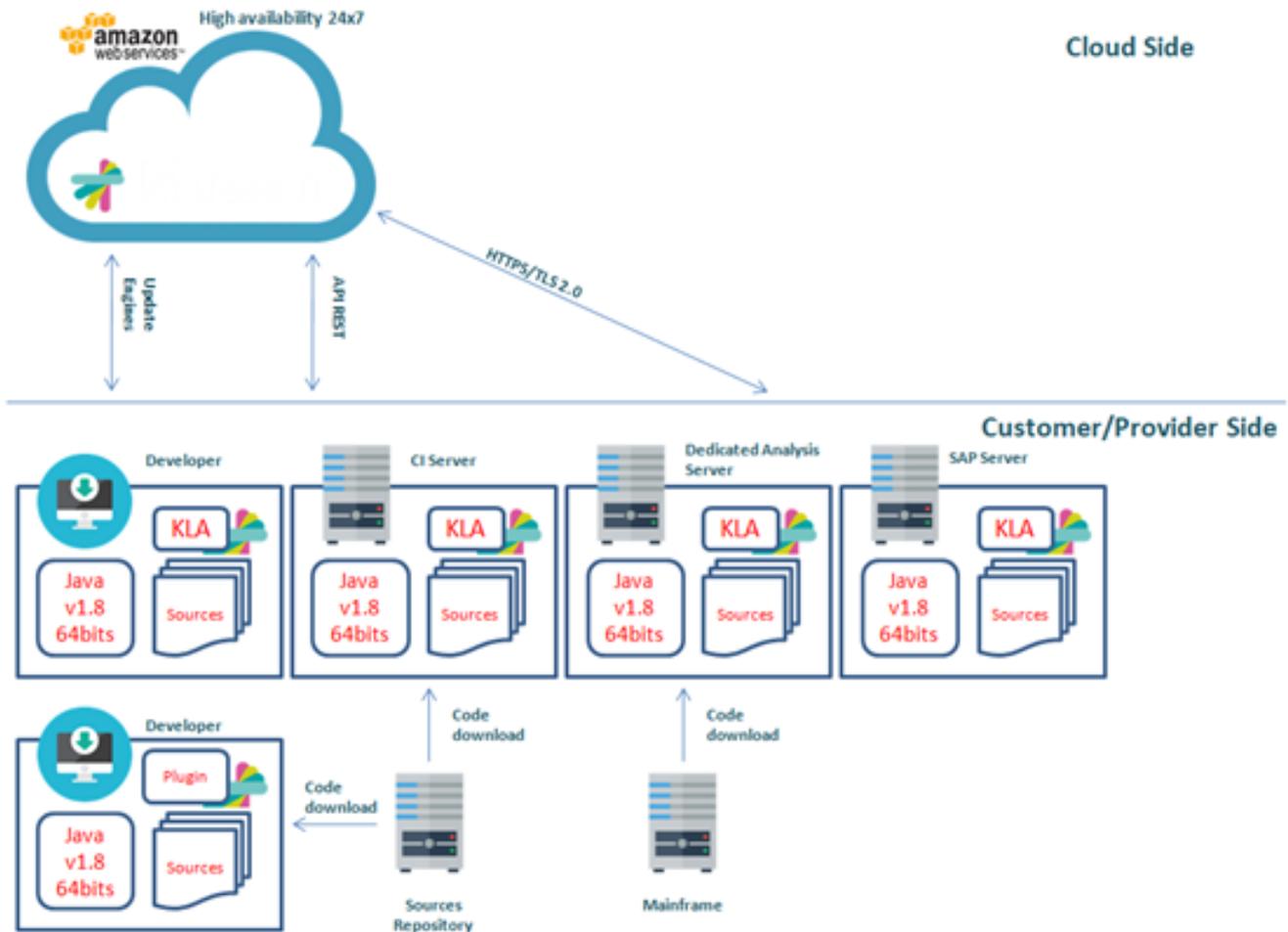


Kiuwan Local Analyzer provide the basis for **external system integration** (CI systems, SAP servers, etc) as well as to **execute analyses in your development IDE**.

Please visit [Developers - Integrations](#) for further help on how to integrate with Jenkins, Team Foundation Server, IBM UrbanCode Deploy, Cloudbees, Bluemix DevOps, TeamCity, etc.

Also, you can visit [Kiuwan for Developers](#) if you need to use Kiuwan from within your IDE.

Please visit [Kiuwan Local Analyzer](#) for further info.



How Kiuwan works

- i** Kiuwan gathers evidence from the application's source code using **Kiuwan static analyzers**. Kiuwan supports more than 20 different technologies, from J2EE to .NET, including legacy (SAP, Cobol, etc) and SQL. Please visit [Kiuwan Supported Technologies](#)

Based on this evidence, Kiuwan calculates and presents relevant **Software Analytics metrics** to help stakeholders make informed decisions and continuously improve the software and SDLC processes.

- Source code static analysis, either locally —through a downloadable agent— or in the cloud —uploading the code to Kiuwan site—
- In-depth detection of **Security Vulnerabilities**, providing detailed reports on where the vulnerabilities appear, their correlation to Security standards, providing remediation clues and assessing remediation progress.
- **Quality Defects** detection that affect important software characteristics: Reliability, Efficiency, Maintainability and Portability
- Calculation of **Software Metrics** —number of violations, complexity, design, code size...—.
- Detection of **Duplicate Code**.
- Calculation of **Global Software Indicators**, necessary for the governance and management of the software applications portfolio —Risk associated with the structural Security and Quality of the code, Global Indicator and software characteristics indicators, Effort to target, Technical debt —.

i Beyond the specific analysis information provided at the analysis moment, Kiuwan provides a **collaborative environment** that lets you to **explore** all the gathered information

- All results are available in your Kiuwan account through **Dashboards** (with powerful *Filters* , *Aggregated and Historical Views*, etc)
- You can also extract results to consume elsewhere through Kiuwan's **REST API**.
- **Reports** generation at all levels and in different formats (PDF, CSV, etc.), with the ability to create your own **Custom Reports** with custom level of details depending on your specific needs
- A complete set of **tools to fully customize your needs**:
 - Create and manage different software **models** to analyze your applications.
 - Generate and track **action plans** automatically.
 - **Mute defects** when needed and re-calculate analytics on the fly.
 - Create and manage different **audits** and apply them automatically to all deliveries in your application life cycle.
 - Group your applications in **portfolios** to give you relevant perspectives of your Software Analytics.
 - Generate **rankings** by perspective.
 - Cross different perspectives for several metrics and indicators to answer important questions about your application portfolio.
 - Etc.

Kiuwan products

Kiuwan SaaS has been designed to **suite your needs** and provides you with a *full suite of solutions* that leverage you existing source code to build up a comprehensive **Security and Software Analytics environment**.

i **The Truth is in the Source Code**
At Kiuwan we firmly believe that "*the truth is in the source code*". As you could read in this paper, you will see that all Kiuwan functionalities are based on an *in-depth analysis of your source code*.

Depending on your needs, Kiuwan provides solutions to **analyze your code**, **manage your applications portfolio** and **expand to development** staff.

The screenshot shows the Kiuwan website interface. At the top, there is a navigation bar with the Kiuwan logo on the left and menu items: Products, Resources, Company, Login, and Free Trial. Below the navigation bar, the main content area is divided into three columns: ANALYZE..., MANAGE..., and EXPAND... Each column contains several product cards with colored headers and brief descriptions.

ANALYZE...	MANAGE...	EXPAND...
CODE SECURITY Rigorous approach in the detection of security vulnerabilities, meeting standards.	LIFE CYCLE Far-reaching supervision of all change management processes. Deliveries audit.	KIUWAN FOR DEVELOPERS Analyze your applications directly from your developer's IDE
CODE ANALYSIS Gain unparalleled scope with ease. No need to configure, no need to upload your code.	GOVERNANCE Portfolio management made simple. Make accurate and reliable decisions.	CODE REVIEW Analyze your open source & private GitHub repositories.
ARCHITECTURE A revolutionary approach to application inventory management.		

Analyze your code

Kiuwan Code Security

Kiuwan Code Security enforces a rigorous approach in the **detection of Security Vulnerabilities**.

We strive to meet the most stringent requirements and our compliance reports meet well-known market standards (OWASP, CWE, MISRA, NIST, PCI, and CERT among others). Integrate Kiuwan Code Security in your development process and increase the overall security of your applications while reducing risk and cost thanks to early detection and correction of newly introduced vulnerabilities. Your developers and security managers will have at their fingertips details of security vulnerabilities and remediation progress.

Kiuwan Code Analysis

Kiuwan Code Analysis offers unparalleled scope in the **detection of quality defects**, smoothly integrating within continuous development processes.

Identify code defects and manage your remediation effort with blazingly fast speed in a collaborative and decentralized environment. Your developers and project managers will have all the information they need to continuously improve applications.

Kiuwan Architecture

Kiuwan Architecture offers a revolutionary approach to **Application Inventory Management**, letting you *to detect and surfaces the components and dependencies in your applications*, giving you the ability to truly understand your architecture and applications' structure.

Manage your applications portfolio

Kiuwan Life Cycle

Kiuwan Life Cycle lets you sensibly reduce development time, testing and integration effort during your software development life cycle by establishing **baselines** and analyzing **deliveries** and **change requests**, letting you to define and apply **automatic audits** to make sure every delivery is not going to make your application worse.

Kiuwan Governance

Kiuwan Governance helps you to make informed decisions based on the objective information gathered by Code Security and Code Analysis. Group your applications in portfolios that are meaningful for your business and consume aggregated information by the perspectives they provide. Manage the different types of risk you face in the different perspectives, create rankings to prioritize efforts and much more. Help decision makers focus on that, make decisions, without the complicated technical details.

Expand to your daily tasks

Kiuwan for Developers

Kiuwan for Developers is a plug-in available for Eclipse and IBM RAD IDEs that will check code against Security and Quality issues at the earliest stage, i.e. as you type your code. Define your Security and Quality thresholds and spread the check over the developers' workbench. That way, you will be sure that no "bad" code arrives to production or integration environments without have been properly fixed at the developer desk.

Kiuwan Code Review

(old) Kiuwan Code Review is a Kiuwan version specially suited to GitHub collaborative environment. If you are using this environment, you can benefit of Kiuwan by seamlessly analyze (automatically or on-demand) your GitHub repositories.

How can I start to work with Kiuwan

In order to use Kiuwan, you must have a **Kiuwan Account**. If you do not have one yet, register for a Kiuwan trial account

Once you have a Kiuwan account, you have access to the Kiuwan collaborative environment in the cloud, and you can start analyzing your applications to generate the Software Analytics for your application portfolio.

The user experience is extremely intuitive and simple:

- **Create your first application.**
- **Decide how to analyze the code**

- **Locally**, by downloading and installing the Kiuwan Local Analyzer on a local machine and sends the results to the server; or
- **In the cloud**, "uploading" the code of your application.
- **Analyze** your application
 - Do not worry if there is code of different technologies and languages, Kiuwan know how to distinguish them.
 - If you choose to analyze in the Kiuwan cloud, Kiuwan deletes the uploaded code to safeguard your privacy once the analysis is finished
- **Work with the results** in one of these ways:
 - Using the Kiuwan **Dashboards**;
 - Generating **PDF reports**, either at executive or detail level;
 - Exporting the result data in **Excel** format; or
 - Using the **REST API** to extract relevant information.
- **Iterate and Refine**
 - With the results and the list of recommendations, it would be normal that your development team wants to review and fix the code and analyze it again, to verify whether they have achieved the desired goals.
 - You can see, therefore, the evolution over time of your application's Software Analytics. This will let you "refine" the Kiuwan default Software Model to your specific needs.
- **Manage and Govern**
 - Kiuwan Governance allows you to **group your applications** in "portfolios" or logical groups, to obtain global indicators for the criteria you need —Technology, Suppliers, functional units...— to analyze their **evolution** in time or compare its results.
- **Integrate the analysis in your Software Development Life Cycle**
 - To implement **continuous analysis** within other SDLC continuous processes (integration, deployment).
 - You can **automate Kiuwan analysis** for your application or for deliveries of change requests during maintenance if you include Kiuwan Life Cycle functionality.

From there, the sky is the limit.