

VMware Tanzu Spring Application Advisor

Simplify app modernization to automate upgrades

Tanzu Spring stands apart

Spring Application Advisor stands out from other tools by offering a complete and incremental upgrade path for Spring Java APIs and multiple repositories at scale.

Effortlessly upgrade your Spring applications at scale

Additional benefits:

- **Continuous upgrades:** Automated pull prequests for seamless updates.
- **Incremental progress:** Step-by-step migration paths for ease of implementation.
- **Short-lived branches:** Isolated branches for clear and concise changes.
- **Automated reduction of technical debt:** streamlined process to minimize technical liabilities.

What is Spring Application Advisor?

Spring Application Advisor is an upgrade orchestration tool from VMware Tanzu designed to streamline and automate Spring's upgrade process across multiple repositories and teams. Ensures your applications stay up-to-date with the latest versions of Spring dependencies, reducing security vulnerabilities, and leverages the newest Java performance improvements.

How Spring Application Advisor Works

Spring Application Advisor streamlines the upgrade process with its native CLI, seamlessly integrating into your CI/CD pipeline. It automatically generates a pull request whenever a new version of your Spring dependencies is available. If your application uses Spring as a transitive dependency through internal components, Spring Application Advisor first creates a pull request to upgrade Spring within those internal components. Once those pull requests are merged and the components are released, updates your application to use the new versions of those internal components. These pull requests include updates to your build configuration and Java files, ensuring a smooth upgrade experience.

Spring Application Advisor resolves all the Spring projects that need to be updated simultaneously, so that most generated pull requests can successfully build into your CI system without any additional manual code change. For instance, if an application uses Spring Web 5.3.x alongside Spring Security 5.8, the Spring Application Advisor will determine that the next upgrade step involves simultaneously upgrading Spring Web and Spring Security to version 6.0.x.

Spring Application Advisor Can:

Boost Developer Productivity and Security

Improving developer productivity and security requires a strategic approach with automatic updates and incremental enhancements. Continuous pull requests enable seamless Spring dependency upgrades and API-breaking changes, keeping systems current with minimal disruption through regular, small updates.

- **Automatic Updates:** Continuous pull requests that upgrade your Spring dependencies and fix Spring API-breaking changes.
- **Incremental Enhancements:** Regular, small updates ensure systems remain current without large, disruptive changes.

Minimize CVE Investigation Impact

Keeping an up-to-date build ready for release shortens CVE resolution time, allowing teams to focus on innovation instead of outdated systems. This boosts operational efficiency by prioritizing progress over maintenance.

- **Faster Time to Resolution:** Always have an updated build ready to release, which reduces time spent on CVE investigations.
- **Enhanced Operational Efficiency:** Keep your operations team focused on innovation, rather than firefighting outdated builds.

Tanzu Platform Integration

Spring Application Advisor provides a portfolio analysis of all your Git repositories via the Tanzu Platform UI. This will help you to understand, before even configuring automatic upgrades, what repositories require more immediate attention for using non-supported Spring libraries with vulnerabilities.

Tanzu Platform Integration Benefits

- **Enhanced Efficiency:** By integrating with Tanzu, Spring Application Advisor enables streamlined workflows across development and operations, reducing manual intervention and expediting deployment processes.
- **Robust Security:** The alignment with Tanzu's security protocols enables your applications to be fortified against vulnerabilities, supporting a proactive defense strategy within your software environment.
- **Scalability and Flexibility:** Tanzu's flexible architecture, combined with the Advisor's continuous upgrade capabilities, offers an agile and scalable solution that grows with your organization's needs.
- **Unified Management:** Benefit from centralized control and comprehensive oversight provided by Tanzu's robust management tools, empowering teams to focus on innovative development while maintaining robust operational health.

Leading the continuous upgrade culture

Outdated applications risk security and flexibility. Spring Application Advisor addresses this with continuous upgrades, allowing apps to leverage the latest Spring tech securely. It empowers engineering leaders to automate upgrades and reduce vulnerabilities, keeping your organization at the forefront of innovative, secure software development.

- **Continuous Upgrades:** Spring Application Advisor automatically initiates pull requests whenever a new version of a Spring dependency is available. It also encourages teams to define automated upgrade recipes for internal components using OpenRewrite.
- **Review and Validate:** These pull requests include updates to Java files and build configurations, which the development team can review and validate.
- **Stay Ahead of Security Vulnerabilities:** The tool helps teams proactively address security vulnerabilities.
- **Enhance Productivity:** It boosts team productivity by minimizing the time spent on manual updates.
- **Focus on Innovation:** By keeping teams ahead of security challenges and enhancing productivity, the tool allows greater focus on innovation.

A culture of continuous upgrades seamlessly incorporates enhancements into the software development life cycle, ensuring they don't consume multiple sprints, but instead prioritize maintaining code quality and adaptability.

Getting Started with Spring Application Advisor

Beginning your journey with Spring Application Advisor is straightforward and designed to seamlessly integrate into your existing workflows. To capitalize on its powerful capabilities, follow these key steps:

1. **Install the CLI:** Install the Spring Application Advisor CLI from the official VMware Tanzu download site. This tool is essential for interacting with the advisor and managing your application's upgrade process efficiently.
2. **Configure Access:** Ensure your development environment is properly configured for access to your Tanzu Spring repositories. This involves setting up authentication credentials and permissions to allow the advisor to monitor and initiate updates.
3. **Integrate into CI/CD Pipeline:** Run Spring Application Advisor from your CI/CD pipeline. This allows the advisor to automatically track dependency updates, generate pull requests, and propose upgrades without disrupting your existing development cycles.
4. **Initial Assessment:** Run an initial assessment of your application portfolio using the advisor's discovery features. This process will help you identify immediate improvement opportunities and prioritize the necessary upgrades and patches.

5. Review and Automate: Evaluate the proposed updates through generated pull requests. Once satisfied with the advisor's recommendations, automate the process to apply updates regularly, keeping your system secure and efficient with minimal manual intervention.

Following these steps, you can effectively leverage Spring Application Advisor's innovative features to maintain a secure software development environment, allowing your development teams to focus on impactful projects.

For more information on Spring Application Advisor and Tanzu Platform, please visit <https://www.vmware.com/products/app-platform/tanzu-spring>

Additional Resources:

- [Introducing Spring Application Advisor Blog](#)
- [Spring Application Advisor Documentation](#)
- [What is and How to Spring Application Advisor Video](#)
- [Spring Forward](#)
- [Spring Innovations Free Webinar](#)