

Madrid GUG



WHAT'S NEW IN GRAILS[®] FRAMEWORK 5

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About Puneet

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He is very enthusiastic about the Grails and Micronaut frameworks, Groovy, Docker, and open source technologies.

If you'd like to get in touch, feel free to say hello on twitter.com/puneetbhl



AGENDA



- Introducing Grails Framework 5
- Upgrading
- Build and Infrastructure
- What Does Micronaut Integration Mean for You?
- Recent Updates
- The Road Ahead

Introducing Grails Framework 5





Dependent Libraries

- Apache Groovy 3
- Gradle 7.2
- Micronaut 3
- Spring framework 5.3
- Spring Boot 2.6
- Spock 2.0-groovy-3.0



Deprecations

The dot-based configuration access (i.e., `grailsApplication.config.a.b.c`) is deprecated.

We recommend you use `grailsApplication.config.getProperty(key, type)`.



JUnit5

- Running JUnit4 tests on JUnit Platform
- Annotation in `org.junit.jupiter.api`
- Assertions in `org.junit.jupiter.api.Assertions`
- `@BeforeEach` and `@AfterEach`
- `@BeforeAll` and `@AfterAll`
- junit-vintage-engine in runtime classpath
- Migrate from JUnit4
(<https://junit.org/junit5/docs/current/user-guide/#migrating-from-junit4>)



Grails Gradle Plugin

The Grails Gradle Plugin was originally part of Grails Core; it has now been moved to a separate repository.

The Grails Gradle plugin might not advance with the same speed as Grails Core. So, we have added a separate Gradle property, `grailsGradlePluginVersion`, to decouple it from Grails Core version.

```
apply plugin:"org.grails.grails-web"
```




Semantic Versioning 2.0

Starting with version 4.0.0, the Grails framework follows semantic versioning 2.0.0 to make the release process more predictable and simple.

<https://semver.org/>



Grails Plugins

- Most Grails plugins that work with Grails framework 4 should work with Grails framework 5 as well.
- Building configuration instead of plugins.



JCenter and Bintray Shutdown

<https://jfrog.com/blog/into-the-sunset-bintray-jcenter-gocenter-and-chartcenter/>



Publishing Plugins

- The Grails Gradle Publish plugin is removed
- The Grails Profile Publish plugin is removed
- Instead use Gradle maven-publish plugin
- Include/update plugin in the Grails Plugin Portal



The Grails Wrapper Update

In June, the Grails Framework Artifactory instance was updated. As a result, the old Grails wrapper now fails under certain conditions because the URL it uses to retrieve information is no longer supported.

<https://grails.org/blog/2021-06-10-grails-wrapper-update.html>

Upgrading





Upgrading

- Grails framework 3 is EOL (end of life), so it's a good time to update your applications and plugins
- Migrate tests from JUnit4 to JUnit5
- Change `grailsVersion=5.1.0`
- Remove any reference to `jceneter()`
- Update to Gradle 7.2
 - Run `gradle help --scan`
 - Execute `gradle wrapper --gradle-version 7.2`
- Gradle scope changes



Apache Groovy 3

- No more JDK warning with JDK 11 or higher
- Java 16 support
- New Parrot parser
- GDK additions: Several new extension methods
- Release Notes (<https://groovy-lang.org/releases/groovy-3.0.html#releasenotes>)



GORM 7.1

- Apache Groovy 3
- Spring 5.3
- Spring 2.5.5
- Hibernate 5.5.7 (<https://hibernate.org/orm/releases/5.5/>)
- MongoDB Driver Sync 4
(<https://mongodb.github.io/mongo-java-driver/4.0/upgrading/>)
- Neo4J Driver 4



Upgrading - Spring Boot Changes

- Hibernate Validator 6.2
(<https://in.relation.to/2021/01/06/hibernate-validator-700-62-final-released/>)
- Environment Variable Prefix
- Metrics and endpoints
- Java 16
- Jetty 10 Support
- Configuration Changes
(<https://github.com/spring-projects/spring-boot/wiki/Spring-Boot-2.5-Configuration-Changelog>)
- Spring Boot 2.5 Release Notes
<https://github.com/spring-projects/spring-boot/wiki/Spring-Boot-2.5-Release-Notes>



Upgrading - Spring Changes

- Official support for Apache Groovy 3
- What's New in Spring Framework 5.x

<https://github.com/spring-projects/spring-framework/wiki/What%27s-New-in-Spring-Framework-5.x>



Gradle 7.2

- Use `mavenCentral()`
or `maven { url "https://repo.grails.org/grails/core" }`
- The scope “provided” is removed.
- Apache Groovy 3
- Removal of Compile and Runtime Configurations
- Use maven-publish instead of maven
- Duplicate Strategy
- Upgrading from Gradle 5.x
https://docs.gradle.org/7.2/userguide/upgrading_version_5.html
- Gradle 7.2 Release Notes <https://docs.gradle.org/7.2/release-notes.html>



Gradle Scope Changes

compile	api/implementation
compileOnly	compileOnly
runtime	runtimeOnly
testCompile	testImplementation
testRuntime	testRuntimeOnly
provided	compileOnly/api



Micronaut 3

- The `javax.inject` annotations are no longer a transitive dependency. Micronaut now ships with the Jakarta inject annotations. Either replace all `javax.inject` imports with `jakarta.inject`, or add a dependency on `javax-inject` to continue using the older annotations:

```
implementation("javax.inject:javax.inject:1")
```

- <https://micronaut.io/2021/08/18/micronaut-framework-3-released/>

Build and Infrastructure





Build and Infrastructure

- Configured Gradle Enterprise (<https://ge.grails.org>) to improve Gradle build
- Moved from Travis to Github Workflows
- The artifacts are published to Maven Central

What Does Micronaut Integration Mean For You?





The Powerful Micronaut Declarative HTTP Client

- `implementation("io.micronaut:micronaut-http-client")`

```
@Client("https://start.grails.org")
interface GrailsAppForgeClient {

    @Get("/{version}/profiles")
    List<Map> profiles(String version)
}
```



Testing Security in the Application

```
when: 'login'
UserCredentials credentials = new UserCredentials(username: 'sherlock', password:
'elementary')
HttpRequest request = HttpRequest.POST('/api/login', credentials)
HttpResponse<BearerToken> resp = client.toBlocking().exchange(request, BearerToken)
resp = client.toBlocking().exchange(HttpRequest.GET('/api/announcements')
    .header('Authorization', "Bearer ${resp.body().accessToken}"),
Argument.of(List, AnnouncementView))

then: 'announcement list'
rsp.status.code == 200
rsp.body() != null
((List)rsp.body()).size() == 1
```



Grails and Micronaut Kafka

```
import io.micronaut.configuration.kafka.annotation.KafkaClient
import io.micronaut.configuration.kafka.annotation.Topic

@KafkaClient
interface AnalyticsClient {

    @Topic('analytics')
    Map updateAnalytics(Map book)
}
```



Micronaut Features That Do Not Work With Grails

- Tracing
- Metrics
- Security
- CORS
- Open API

Recent Releases





Grails Database Migration Plugin 4.0.0-RC2 Released

- Support Liquibase 4.6
- Liquibase Extension Upgrade Guide (<https://docs.liquibase.com/tools-integrations/extensions/extension-upgrade-guides/home.html>)
- Release Notes (<https://github.com/liquibase/liquibase/releases/>)



Grails 5.0.3 Released

- Bug-fixes and Improvements
- Make Grails 5 compatible with Gradle 7.2
- Fixed some bug around grails.factories file
- Release Notes (<https://github.com/grails/grails-core/releases/tag/v5.0.3>)



Log4J2 - CVE-202144228

- Grails® framework blog post (<https://grails.org/blog/2021-12-14-log4j2-cve.html>)
- CVE-202144228 (<https://nvd.nist.gov/vuln/detail/CVE-2021-44228>)

The Road Ahead





Grails Framework 5.1

- Spring Boot 2.6.1
- Micronaut 3.2
- Hibernate 5.6
- MongoDB Driver 4.4
- Better support with Gradle 7.2



Upcoming Changes

- Improvements to the Grails CLI
- Spring Security Core Grails Plugin



2GM Quarterly Town Hall Meeting

Each Town Hall Meeting is led by a panel of 2GM users, developers, and advocates. Everyone in the 2GM communities is welcome and encouraged to participate.

<https://objectcomputing.com/resources/events/2gm-town-hall>

Next Meeting - Friday, January 7, 2022



- A not-for-profit organization that supports and collectively leads the open source Grails project.
- Supported by a Technology Advisory Board that ensures the Framework continues to reflect and serve its diverse and growing user community.
- The Board meets quarterly to discuss and make recommendations regarding the Grails framework roadmap and technical direction.
- For more information, check out <https://grails.org/foundation/index.html>.



Thank You

Community involvement is vital for the success of Grails framework. We appreciate the Grails community for the support and feedback throughout this journey.

We are excited about this latest release. Please, upgrade your applications to Grails framework 5. We would love to hear about your experience, and if you need any help with your upgrade, we are here to support(<https://grails.org/support.html>) you.

Merry Christmas!

