Hawaii Framework Reference Documentation

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Version 2.0.0.BUILD-SNAPSHOT

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E kūlia i ka nu’u. Strive to reach the highest.

Chapter 1. Introduction to Hawaii

The Hawaii Framework is a Java framework for developing Spring based applications.

It provides production-ready features and integrations based best practices and experience to boost projects.

The Hawaii Framework is developed internally at QNH and is used in projects for medium and large enterprise customers.

1.1. Spring Boot

Combining Spring Boot and the Hawaii production-ready features and auto configuration brings even more power and simplicity to developers, without sacrificing flexibility.

The Hawaii Framework also provides various Spring Boot Starters to automatically include the needed dependencies and trigger the auto configuration of the Hawaii production-ready features.

But it is important to mention that most of the Hawaii features can also used without using Spring Boot. In that case the desired features need to be configured manually by defining the appropriate Spring beans inside the application's context.

Chapter 2. Getting Started with Hawaii

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Chapter 3. Hawaii Features

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3.1. Environments

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3.2. Configuration properties

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3.3. Hawaii Time

`HawaiiTime` is not merely a convenient wrapper to instantiate new `java.time` date and time objects. It provides an application wide `java.time.Clock` reference which is particular useful for unit testing.

It is similar to Joda's `DateTimeUtils` which also allows setting a fixed current time. However it is important to note that Joda's `DateTimeUtils` uses a static variable to store the current time. `HawaiiTime` does not take this approach. Instead the `HawaiiTime` bean needs to be injected in any class that needs to instantiate new date and time objects. This approach is more flexible and e.g. has the benefit that unit tests can be run in parallel. See example usage below.

```
public class MyClass {

    private HawaiiTime hawaiiTime;

    public MyClass(HawaiiTime hawaiiTime) {  ①
        this.hawaiiTime = hawaiiTime;
    }

    public void doSomethingWithDate() {
        ZonedDateTime dateTime = this.hawaiiTime.zonedDateTime(); ②
        // ...
    }
}


public class MyClassTests {

    @Test
    public void testDoSomethingWithDate() {
        long millis = System.currentTimeMillis();
        HawaiiTime hawaiiTime = new HawaiiTime();
        hawaiiTime.useFixedClock(millis); ③
        MyClass myClass = new MyClass(hawaiiTime);
        myClass.doSomethingWithDate();
        // ...
    }
}
```

① Inject the `HawaiiTime` bean.

② Use the injected `HawaiiTime` bean to instantiate new date and time objects.

③ In unit tests a fixed clock can be used to manipulate and predict the exact current time.

Another benefit of using `HawaiiTime` is that a fixed time can be used in a running application to test how it behaves on a given date or time.

Third-party libraries being used by the application do not use `HawaiiTime` and probably instantiate date and time objects based on the `System` time.

Hawaii uses `UTC` as default timezone but this can be changed by setting the `hawaii.time.timezone` configuration property. The provided value will be parsed by `java.time.ZoneId#of(String zoneId)` and supports different timezone formats like `UTC`, `Europe/Amsterdam` and `GMT+1`.

The creation of the `HawaiiTime` bean can also be disabled by setting `hawaii.time.enabled` to `false`.

3.4. Resource Assembler

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3.5. Validation

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Chapter 4. Hawaii Starters

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4.1. hawaii-starter

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4.2. hawaii-starter-rest

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4.3. hawaii-starter-test

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Chapter 5. Deployment

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Appendices

Appendix A: Hawaii application properties

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```
# ====================================================================
# HAWAII PROPERTIES
#
# This sample file is provided as a guideline. Do NOT copy it in its
# entirety to your own application.               ^^^
# ====================================================================

# HAWAII SPRING BOOT DEFAULTS
spring:
  jackson:
    date-format: com.fasterxml.jackson.databind.util.ISO8601DateFormat
    property-naming-strategy: CAMEL_CASE_TO_LOWER_CASE_WITH_UNDERSCORES
    serialization:
      indent-output: false
      write-dates-as-timestamps: false
      write-date-timestamps-as-nanoseconds: false
logging:
  file: log/hawaii.log
  level:
      org.hawaiiframework: INFO
      org.springframework: INFO


# HAWAII TIME
hawaii:
  time:
    enabled: true # Enable creation of the `HawaiiTime` bean.
    timezone: UTC # The timezone to use like `UTC`, `Europe/Amsterdam` or `GMT+1`.

---

spring:
  profiles: dev
  jackson:
    serialization.indent-output: true
logging:
  level:
    org.hawaiiframework: DEBUG

---

spring:
  profiles: test

---

spring:
  profiles: prod
```